

3 Affected Environment, Environmental Consequences, and Mitigation Measures

3.12 Socioeconomics and Communities

3.12.1 Introduction

Section 3.12, Socioeconomics and Communities, of this *Merced to Fresno Section: Central Valley Wye Draft Supplemental Environmental Impact Report (EIR)/Environmental Impact Statement (EIS)* (Draft Supplemental EIR/EIS) updates the *Merced to Fresno Section California High-Speed Train Final Project Environmental Impact Report/Environmental Impact Statement* (Merced to Fresno Final EIR/EIS) (California High-Speed Rail Authority [Authority] and Federal Railroad Administration [FRA] 2012) with new and revised information relevant to socioeconomics and communities, analyzes the potential impacts of the No Project Alternative and the Central Valley Wye alternatives, and describes impact avoidance and minimization features (IAMF) that would avoid, minimize, or reduce these impacts. Where applicable, mitigation measures are proposed to further reduce, compensate for, or offset impacts of the Central Valley Wye alternatives. Section 3.12 also defines the socioeconomics and communities within the region and describes the affected environment in the resource study areas (RSA).

The analysis herein is consistent with or has similarities to and differences from the analysis conducted in the Merced to Fresno Final EIR/EIS. Both analyses examine potential impacts on communities, residents, businesses, agricultural operations, community facilities, and the local economy, and use the same methods for evaluating impacts within their respective RSAs. Where information has changed or new information has become available since the Merced to Fresno Final EIR/EIS was prepared in 2012, the analysis in this Draft Supplemental EIR/EIS uses the updated versions of these sources or datasets. Relevant portions of the Merced to Fresno Final EIR/EIS that remain unchanged are summarized and referenced in this section but are not repeated in their entirety.

The *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Community Impact Assessment) (Authority and FRA 2016a) provides additional technical details on socioeconomics and communities. Additional detailed information on property displacements and relocation impacts is provided in the *Merced to Fresno Section: Central Valley Wye Draft Relocation Impact Report* (Draft Relocation Impact Report) (Authority and FRA 2016b).¹ These technical reports are available on the Authority's website:

http://hsr.ca.gov/Programs/Environmental_Planning/supplemental_merced_fresno.html

Additional details on socioeconomics and communities are provided in the following appendices in Volume II of this Draft Supplemental EIR/EIS:

- Appendix 2-C, Applicable Design Standards, provides the list of relevant design standards for the Central Valley Wye alternatives.
- Appendix 3.12-A, Socioeconomics and Communities Local and Regional Plans and Laws Consistency Analysis, provides a discussion of inconsistencies or conflicts that may exist between the Central Valley Wye alternatives and regional or local plans.

¹ The Community Impact Assessment and the Draft Relocation Impact Report were finalized in 2016; however, the content of this Draft Supplemental EIR/EIS has continued to evolve to incorporate the most current data and other sources of information relevant to the environmental analyses, some of which were not available at the time that the technical reports were prepared. As a result, some of the information presented in the Draft Supplemental EIR/EIS is more current than the information presented in the technical reports. To provide clarity on any information and data differences between the Draft Supplemental EIR/EIS and the technical reports and the location of the most current information, a Central Valley Wye Technical Report Memorandum of Updates has been produced and included in Appendix 3.1-D, Central Valley Wye Technical Report Memorandum of Updates.

- Appendix 3.12-B, Relocation Assistance Documents, provides a summary of the rights and benefits of displacees under the Authority's Relocation Advisory Assistance program.
- Appendix 3.12-C, Children's Health and Safety Risk Assessment, describes potential children's environmental health and safety risks for the Central Valley Wye alternatives.
- Appendix 3.12-D, Economic Effects on School Districts, summarizes potential economic effects from the Central Valley Wye alternatives on public school districts.
- Appendix 3.12-E, High-Speed Rail Impacts on Confined Animal Agriculture Facilities, summarizes the potential economic effects from the Central Valley Wye alternatives on confined animal agriculture.
- Appendix 3.12-F, Summary of Issues Affecting Schools, provides a summary of the potential environmental impacts of the Central Valley Wye alternatives on local schools.
- Appendix 3.13-A, Land Use and Development Local and Regional Plans and Laws Consistency Analysis, provides a discussion of inconsistencies or conflicts that may exist between the Central Valley Wye alternatives and regional or local plans.
- Appendix 3.14-C, Remnant Parcel Analysis and Important Farmland Mitigation, provides information regarding the process and results of identifying noneconomic remnant parcels of Important Farmland as a result of the Central Valley Wye alternatives.

Socioeconomics and communities, including the rural communities and agricultural economy of the San Joaquin Valley, are important factors for consideration in construction and operations of a proposed transportation facility that could potentially affect the quality of life of individuals and groups living or working in the RSAs. Nine resource sections and one chapter in this Draft Supplemental EIR/EIS provide additional information related to socioeconomics and communities:

- **Section 3.2, Transportation**—Impacts of the Central Valley Wye alternatives on traffic and circulation, including bicycle and pedestrian facilities
- **Section 3.3, Air Quality**—Impacts of the Central Valley Wye alternatives on attainment of National Ambient Air Quality Standards
- **Section 3.4, Noise and Vibration**—Noise and vibration impacts of the Central Valley Wye alternatives on sensitive receptors and the feasibility of noise abatement
- **Section 3.5, Electromagnetic Fields and Electromagnetic Interference**—Electromagnetic fields (EMF) and electromagnetic interference impacts of the Central Valley Wye alternatives
- **Section 3.10, Hazardous Materials and Wastes**—Impacts of the Central Valley Wye alternatives on human health and safety and the environment
- **Section 3.11, Safety and Security**—Impacts of the Central Valley Wye alternatives on pedestrian, bicyclist and motorist safety, and emergency response and travel times
- **Section 3.13, Land Use and Development**—Impacts of the Central Valley Wye alternatives on existing and planned land use and zoning, including consistency with local and regional land use and transportation plans
- **Section 3.14, Agricultural Farmland**—Impacts of the Central Valley Wye alternatives on farmland caused by conversion of agricultural land use and wind-induced effects on agricultural operations
- **Section 3.15, Parks, Recreation, and Open Space**—Impacts of the Central Valley Wye alternatives on parks, recreation, and open space
- **Section 3.16, Aesthetics and Visual Resources**—Impacts of the Central Valley Wye alternatives on the visual environment

- **Section 3.18, Regional Growth**—Impacts of the Central Valley Wye alternatives on employment, population growth, and future urban development
- **Chapter 5, Environmental Justice**—Discusses potential environmental justice populations near the Central Valley Wye alternatives and the effects of each alternative on these populations

Definition of Resources

The following are definitions of socioeconomic and community resources analyzed in this Draft Supplemental EIR/EIS. These definitions are the same as those used in the Merced to Fresno Final EIR/EIS (Authority and FRA 2012).

- **Communities**—*Communities* refers to groups of people living in the same city, town, or neighborhood, who exhibit behavior patterns expressed through daily social interactions, the use of local facilities, participation in local organizations, and involvement in activities that satisfy the population’s economic and social needs.
- **Displacements and Relocations**—*Displacements* refers to the movement of people out of their residences, businesses, nonprofit organizations, or farms as a result of acquisition of private property for a transportation project. *Relocations* refers to the placement of people into new homes, commercial properties, or farms with assistance and benefits in accordance with federal and California laws as discussed in Section 3.12.2, Laws, Regulations, and Orders.
- **Economic Impacts**—*Economic impacts* are changes in employment, business productivity (including agricultural productivity) and public funding. Public funding can be affected by displacements and relocations of residences and businesses, which in turn can alter school district funding, and property and sales tax revenues.

3.12.2 Laws, Regulations, and Orders

This section identifies laws, regulations, and orders that are relevant to the analysis of socioeconomics in this Draft Supplemental EIR/EIS. Also provided are summaries of new or updated laws, regulations, and orders that have occurred since publication of the Merced to Fresno Final EIR/EIS.

3.12.2.1 Federal

The following federal laws, regulations, and orders are the same as those described in Section 3.12.2, Laws, Regulations, and Orders, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.12-1 through 3.12-3):

- Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545)
- Improving Access to Services for Persons with Limited English Proficiency (U.S. Presidential Executive Order 13166)
- Protection of Children from Environmental Health Risks and Safety Risks (U.S. Presidential Executive Order 13045)
- Americans with Disabilities Act (42 U.S.C. §§ 12101–12213)
- Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. § 61)
- Farmland Protection Policy Act of 1981 (7 U.S.C. §§ 4201–4209 and 7 C.F.R. § 658)

New, additional, or updated federal laws, regulations, and orders follow.

United States Environmental Protection Agency School Siting Guidelines

In December 2007, the Energy Independence and Security Act was enacted by Congress and included a requirement for the U.S. Environmental Protection Agency (USEPA) to develop guidelines for the siting of school facilities with the following considerations:

- Special vulnerabilities of children to hazardous substances or pollution exposures in any case in which the potential for contamination at a potential school site exists
- Modes of transportation available to students and staff
- Efficient use of energy
- Potential use of a school at the site as an emergency shelter (currently available at <https://www.epa.gov/schools/basic-information-about-school-siting-guidelines>).

These guidelines are intended to assist local school districts and community members with understanding environmental factors in making school siting decisions. Although state agencies are not subject to the local plans, regulations, and requirements, the Authority may choose to consider factors set in USEPA guidelines when assessing the mitigation measures developed to minimize impacts on existing or planned schools adjacent to the high-speed rail (HSR) project. The USEPA School Siting Guidelines were published in October 2011, after publication of the Merced to Fresno Draft EIR/EIS in August 2011.

3.12.2.2 State

The following state laws, regulations, and plans are the same as those described in Section 3.12.2 and Section 3.14.2, Laws, Regulations, and Orders, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012):

- California Relocation Assistance Act (Gov. Code, § 7260 et seq.)
- California Land Conservation Act of 1965 (Williamson Act) (Gov. Code, § 51200 et seq.)

3.12.2.3 Regional and Local

General Plan Policies and Ordinances

Table 3.12-1 lists county and community general plans, policies, and goals relevant to the Central Valley Wye alternatives. Refer to Section 3.12.3, Regional and Local, and Appendix 3.13-A, Land Use Plans, Goals and Policies, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012) for more information.

Table 3.12-1 Regional and Local Plans and Policies

Policy Title	Summary
Merced County	
<i>2014 Merced County Regional Transportation Plan (2014)</i>	<p>Merced County adopted the 2014 <i>Merced County Regional Transportation Plan</i> in September 2014 and adopted Amendment 1 on May 19, 2016, updating the previous version of the <i>Merced County Regional Transportation Plan</i> that was included in Section 3.2.2.3 of the Merced to Fresno Final EIR/EIS. The <i>Merced County Regional Transportation Plan 2014–2040</i> includes the following goals and policies:</p> <ul style="list-style-type: none"> ▪ Goal 1: A safe and efficient regional road system that accommodates the demand for movement of people and goods. ▪ Goal 2: Provide an efficient, effective, coordinated regional transit system that increases mobility for urban and rural populations, including transportation of disadvantaged persons. ▪ Goal 3: A rail system that provides safe and reliable service for passengers. ▪ Policy 3.2: Establish a High-Speed Rail system connecting Merced and Los Banos to Sacramento and the Bay Area. ▪ Goal 7: Reduce usage of nonrenewable energy resources for transportation purposes.

Policy Title	Summary
	<ul style="list-style-type: none"> ▪ Goal 8: Achieve air quality standards set by the USEPA and the State Air Resources Board. ▪ Goal 9: Provide economical, long-term solutions to transportation problems by encouraging community designs which encourage walking, transit, and bicycling.
<p><i>2030 Merced County General Plan (2013)</i></p>	<p>Merced County adopted the <i>2030 Merced County General Plan</i> on December 10, 2013, updating the previous version of the <i>Merced County General Plan</i> that was included in Appendix 3.13-A (page 3.13-A-1) of the Merced to Fresno Final EIR/EIS. The <i>2030 Merced County General Plan</i> includes the following goals and policies:</p> <p>Economic Development (ED) Element</p> <ul style="list-style-type: none"> ▪ Goal ED-1: Support and promote growth and diversification of the County's economy. ▪ Policy ED-1.5: Direct infrastructure investments to infill areas and other areas with the greatest potential for economic growth in an effort to obtain the greatest pay-off in terms of economic development. This will include taking advantage of existing infrastructure such as Interstate 5, State Route 99, UC Merced, Castle Commerce Center and Airport, as well as planned infrastructure such as the California High-Speed Rail. ▪ Goal ED-2: Support the existing agricultural economy while expanding infrastructure and existing/new industries in order to increase employment opportunities and attract new investment. <p>Land Use (LU) and Community Character Element</p> <ul style="list-style-type: none"> ▪ Policy LU-1.1: Direct urban development to areas within adopted urban boundaries of cities, Urban Communities, and Highway Interchange Centers in order to preserve productive agriculture, limit urban sprawl, and protect natural resources. ▪ Goal LU-2: Preserve, promote, and expand the agricultural industry in Merced County. ▪ Goal LU-5.C: Provide adequate, efficient, and high-quality residential development that accommodates the housing needs of all income groups expected to reside in Merced County. <p>Agricultural (AG) Element</p> <ul style="list-style-type: none"> ▪ Goal AG-1: Provide the long-term preservation and conservation of land use for productive agriculture, potentially-productive agricultural land, and agricultural-support facilities. ▪ Policy AG-2.4: Encourage property owner participation in programs that preserve farmland, including the Williamson Act, conservation easements, and USDA-funded conservation practices. ▪ Policy AG-2.5: Modify the Agricultural Preserve Rules and Procedures to reduce the Williamson Act minimum required parcel size to 10 acres, consistent with State law. For parcels not operated as part of a larger farming operation, encourage larger parcel size minimums (40 or more acres) and/or evidence of commercial agricultural use for entering new Williamson Act contracts. ▪ Policy AG-2.16: Coordinate with the California High-Speed Rail Authority to locate the high-speed rail along existing major transportation corridors, such as State Routes 99 or 152, to minimize the conversion of productive agricultural land to nonagricultural uses. <p>Health and Safety (HS) Element</p>

Policy Title	Summary
	<ul style="list-style-type: none"> ▪ Goal HS-8: Guarantee the fair treatment of all visitors, residents, employees, and property owners, regardless of age, race, culture, and income with respect to land use and environmental decisions ▪ Policy HS-8.3: Promote the equitable distribution of new public facilities and services that increase and enhance the entire community's quality of life. <p>Transportation and Circulation (CIR) Element</p> <ul style="list-style-type: none"> ▪ Goal CIR-1: Maintain an efficient roadway system for the movement of people and goods that enhances the physical, economic, and social environment while being safe, efficient, and cost-effective. ▪ Goal CIR-3: Maintain a public transit system that provides an alternative to automobile travel, supports ridesharing, and meets the needs of the entire community. ▪ Goal CIR-5: Maintain and expand a rail transportation system that provides safe, efficient, and reliable movement of freight and passengers within and through Merced County. <p>Public Facilities and Services (PFS) Element</p> <ul style="list-style-type: none"> ▪ Goal PFS-8: Coordinate with school districts, colleges, and universities to provide for the educational and literary needs of Merced County residents. ▪ Goal PFS-9: Encourage the development of quality childcare services and facilities throughout the County. <p>Recreation and Cultural Resources (RCR) Element</p> <ul style="list-style-type: none"> ▪ Goal RCR-1: Preserve, enhance, expand, and manage Merced County's diverse system of regional parks, trails, recreation areas, and natural resources for the enjoyment of present and future residents and park visitors. <p>Housing Element (HE)</p> <ul style="list-style-type: none"> ▪ Goal HE-1: To provide for a broad range of housing types and densities to meet the needs of all residents of the unincorporated area. ▪ Goal HE-2: To encourage the construction and maintenance of affordable housing in Merced County, with an emphasis on meeting the needs of extremely low-, very low-, and low-income households. ▪ Goal HE-4: To provide a range of housing types and services for special needs groups. ▪ Goal HE-5: To preserve existing character and integrity of residential neighborhoods and conserve and improve the existing housing stock. ▪ Goal HE-6: To provide decent housing and a quality living environment for all Merced County residents regardless of age, religion, race, ethnicity, creed, sex, sexual orientation, marital status, ancestry, national origin, disability, economic level, and other arbitrary factors.
<p><i>Merced County General Plan: Housing Element (2010)</i></p>	<p>Merced County adopted the <i>Merced County General Plan: Housing Element</i> in 2010. The <i>Merced County General Plan: Housing Element</i> (HE) includes the following goal:</p> <ul style="list-style-type: none"> ▪ Goal HE-5: To preserve existing character and integrity of residential neighborhoods and conserve and improve the existing housing stock.

Policy Title	Summary
<p><i>Merced Vision 2030 General Plan (2015)</i></p>	<p>The <i>Merced Vision 2030 General Plan</i> was adopted by the City Council on January 3, 2012. The <i>Land Use Element</i> was updated in April 2015. The <i>Merced Vision 2030 General Plan</i> includes the following goals and policies:</p> <p>Land Use (L)</p> <ul style="list-style-type: none"> ▪ Goal Area L-1: Residential and Neighborhood Development. ▪ Policy L-1.5 Protect existing neighborhoods from incompatible developments. <p>Sustainable Development (SD)</p> <ul style="list-style-type: none"> ▪ Goal Area SD-1: Air Quality and Climate Change. ▪ Policy SD-1.1 Accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the City of Merced.
Madera County	
<p><i>Madera County 2014 Regional Transportation Plan and Sustainable Communities Strategy (2014)</i></p>	<p>Madera County adopted the <i>Madera County 2014 Regional Transportation Plan and Sustainable Communities Strategy</i> in 2014, updating the previous version of the Madera County Regional Transportation Plan that was included in Section 3.2.2.3 of the Merced to Fresno Final EIR/EIS. The <i>Madera County 2014 Regional Transportation Plan and Sustainable Communities Strategy</i> includes the following goals:</p> <ul style="list-style-type: none"> ▪ Goal 1: To promote Intermodal Transportation Systems that are fully accessible, encourage quality growth and development, support the region’s Environmental Resource Management Strategies, and are responsive to the needs of current and future travelers. ▪ Goal 2: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to foster economic competitiveness of the Madera Region. ▪ Goal 4: To maintain the efficiency, safety, and security of the region’s transportation system. ▪ Goal 7: To identify reliable transportation choices that support a diverse population. ▪ Goal 8: To protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).
<p><i>Madera County General Plan: 2016-2024 Housing Element Update (2015b)</i></p>	<p>Madera County adopted the <i>Madera County General Plan: 2016-2024 Housing Element</i> on November 3, 2015, updating the previous version of the <i>Madera County General Plan: Housing Element</i>. Appendix 3.13-A (page 3.13-A-3) of the Merced to Fresno Final EIR/EIS addressed the <i>Madera County General Plan</i>; however, it did not specifically address the <i>Housing Element</i>, which includes the following goals:</p> <ul style="list-style-type: none"> ▪ Goal 2: Encourage and maintain housing affordability in Madera County for all income groups. ▪ Goal 3: Conserve and improve the existing housing stock and provide for a variety of housing types, sizes, price ranges, and densities compatible with the existing character and integrity of residential neighborhoods. ▪ Goal 4: Provide safe, adequate, and affordable housing to all special needs groups. ▪ Goal 5: Provide decent housing and quality living environment for all Madera County residents regardless of age, race, religion, sex, marital status, ancestry, national origin, disability, or economic level. ▪ Goal 7: Provide a well-balanced and diverse economy that provides an adequate number of jobs to support the local population.

Policy Title	Summary
<p><i>Madera County General Plan (1995)</i></p>	<p>Madera County adopted the <i>Madera County General Plan</i> in 1995, which is the same version addressed in the Merced to Fresno Final EIR/EIS. The <i>Madera County General Plan</i> includes the following goals:</p> <ul style="list-style-type: none"> ▪ Policy 1.E.4: The County shall endeavor to protect the natural resources upon which the county's basic economy (e.g., agriculture, forestry, recreation, and tourism) is dependent, and shall promote economic expansion based on Madera County's unique recreational opportunities and natural resources. ▪ Goal 2.A: To maintain a comprehensive and coordinated multimodal transportation system that enhances the mobility of people, improves the environment, and is safe, efficient, and cost effective. ▪ Goal 2.D: To promote a safe and efficient mass transit system, including both rail and bus, to reduce congestion, improve the environment, and provide viable non-automotive means of transportation in and through Madera County. ▪ Goal 2.H: To maximize the efficient use of transportation facilities so as to: 1) reduce travel demand on the county's roadway system; 2) reduce the amount of investment required in new or expanded facilities; 3) reduce the quantity of emissions of pollutants from automobiles; and 4) increase the energy-efficiency of the transportation system. ▪ Goal 5.A: To designate adequate agricultural land and promote development of agricultural uses to support the continued viability of Madera County's agricultural economy. ▪ Goal 5.A.13: The County shall require development within or adjacent to designated agricultural areas to incorporate design, construction, and maintenance techniques that protect agriculture and minimize conflicts with adjacent agricultural uses.
<p><i>City of Chowchilla 2040 General Plan (2011)</i></p>	<p>The City of Chowchilla adopted the <i>City of Chowchilla 2040 General Plan</i> in May 2011. The <i>City of Chowchilla 2040 General Plan</i> supersedes the previous General Plan adopted in 1986. The <i>City of Chowchilla 2040 General Plan</i> includes the following goals:</p> <p>Land Use (LU) Element</p> <ul style="list-style-type: none"> ▪ Objective LU2: Develop and maintain a pattern of residential land uses that provides for a variety and balance of densities, and a mixture of different dwelling and household types. ▪ Objective LU3: Provide single family and multifamily residential. Neighborhoods with a variety of cost ranges (affordability) dispersed throughout the City. <p>Circulation (CI) Element</p> <ul style="list-style-type: none"> ▪ Objective CI 11: Achieve a coordinated regional and local transportation system that minimizes traffic congestion and efficiently serves users. <p>Open Space (OS) and Conservation Element</p> <ul style="list-style-type: none"> ▪ Objective OS 8: Protect agricultural lands and other open spaces used for the managed production of resources from premature urban development by guiding urban development toward vacant or under-used land within the urbanized area and direct new growth toward land adjacent to the urbanized area. ▪ Objective OS 9: Preserve agricultural lands in recognition of their economic, historic and open space benefits and their importance to the character of the City of Chowchilla and to the Central Valley.

Policy Title	Summary
<i>City of Chowchilla 2040 General Plan, 2016 - 2024 Housing Element (2017)</i>	<p>The City of Chowchilla adopted the City of Chowchilla Plan Housing Element in March 2012. The Merced to Fresno Final EIR/EIS addressed the <i>City of Chowchilla General Plan</i>; however, it did not specifically address the <i>Housing Element</i>, which includes the following goal:</p> <ul style="list-style-type: none"> ▪ Goal 4. Objective A: Conserve and enhance existing housing stock and neighborhoods, particularly affordable housing in older areas of the City.
Fresno County	
<i>Fresno County General Plan (2000)</i>	<p>The <i>Fresno County General Plan</i> was adopted on October 3, 2000, and reflects amendments through March 25, 2003. The <i>Fresno County General Plan</i> includes the following goals:</p> <ul style="list-style-type: none"> ▪ Agriculture and Land Use (LU) Element, Goal LU-A: To promote the long-term conservation of productive and potentially productive agricultural lands and to accommodate agricultural-support services and agriculturally-related activities that support the viability of agriculture and further the County's economic development goals.
Stanislaus County	
<i>Stanislaus County General Plan (2016)</i>	<p>The <i>Stanislaus County General Plan</i> was adopted on August 23, 2016. The <i>Stanislaus County General Plan</i> includes the following goals and policies:</p> <ul style="list-style-type: none"> ▪ Land Use Element, Goal 3: Foster stable economic growth through appropriate land use policies. ▪ Policy 16 Agriculture, as the primary industry of the County, shall be promoted and protected.
<i>Waterford Vision 2025 General Plan (2006)</i>	<p>The <i>Waterford Vision 2025 General Plan</i> was adopted on October 26, 2006. The <i>Waterford Vision 2025 General Plan</i> contains the following goals and policies:</p> <ul style="list-style-type: none"> ▪ Land Use (LU) Element, Goal Area L-1: Residential and Neighborhood Development. ▪ Policy L-1.5 Protect existing neighborhoods from incompatible developments. ▪ Sustainable Development (SD) Element, Goal Area SD-1: Air Quality. ▪ Policy SD-1.1 Accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the City of Waterford.

Source: *City of Chowchilla 2017; City of Merced, 2015; City of Waterford, 2006; Fresno County, 2000; Merced County, 2013, 2014; Madera County, 2014, 2015b; Stanislaus County 2016*

HSR = high-speed rail

UC = University of California

USEPA = U.S. Environmental Protection Agency

3.12.3 Compatibility with Plans and Laws

As indicated in Section 3.1.3.3, Compatibility with Plans and Laws, the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) regulations² require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. As such, this Draft Supplemental EIR/EIS describes inconsistency of the Central Valley Wye alternatives with federal, state, regional, and local plans and laws to provide planning context.

There are a number of federal and state laws and implementing regulations, listed in Section 3.12.2.1, Federal, and Section 3.12.2.2, State, that prohibit discrimination and require equal treatment and consideration of the needs of sensitive populations, including children, limited

² NEPA regulations refer to the regulations issued by the Council on Environmental Quality located at 40 CFR Part 1500.

English proficient individuals, disabled individuals, elderly, or racial and ethnic minorities. There are several adopted federal and state policies that pertain to relocation of individuals and are applicable to this Draft Supplemental EIR/EIS. A summary of the federal and state requirements considered in this analysis follows:

- Federal and state laws that prohibit discrimination on the basis of race, color, national origin, age, sex, or disability in programs receiving federal assistance. Applicable acts include the Title VI of the Civil Rights Act, the Americans with Disabilities Act, California Government Code Section 65040.12(e) and the Authority's Title VI Policy.
- Federal and state laws and regulations that establish requirements for the treatment of displaced persons as a result of state or federal actions, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Assistance Act.
- Federal law that establishes requirements for an assessment of environmental health and safety risks that may disproportionately affect children.

The Authority, as the lead state agency proposing to construct and operate the HSR system, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction on the selected alternative. Similarly, FRA, as lead federal agency, is required to comply with all federal laws and regulations. Therefore, there would be no inconsistencies between the Central Valley Wye alternatives and these federal and state laws and regulations.

The Authority is a state agency and therefore is not required to comply with local land use and zoning regulations; however, it has endeavored to design and construct the HSR project so that it is compatible with land use and zoning regulations. For example, the Central Valley Wye alternatives would incorporate IAMFs to reduce impacts on socioeconomics and communities through transportation, noise, and air quality controls; context-sensitive design; and relocation assistance and benefits to displaced residents, businesses, and agricultural operations. A total of 12 plans and 64 policies, goals, and objectives were reviewed. The Central Valley Wye alternatives would be consistent with 51 policies, goals, and objectives and inconsistent with 13 policies, goals, and objectives. Further details and reconciliations are discussed in Appendix 3.12-A. The Central Valley Wye alternatives would be inconsistent with certain provisions of the following regional and local policies and plans:

- **2030 Merced County General Plan (2013)**—Goal LU-2, Policy AG-2.4. The Central Valley Wye alternatives would be inconsistent with these policies, which are concerned with preservation of natural resources and agricultural lands, as well as the associated agricultural economy. Goal HE-5. The Central Valley Wye alternatives would be inconsistent with this policy, which seeks to preserve the existing housing stock and established neighborhoods
- **Madera County General Plan (1995)**—Policy 1.E.4, Goal 5.A, and Policy 5.A.13. The Central Valley Wye alternatives would be inconsistent with these policies, which are concerned with preservation of natural resources and agricultural lands, as well as the associated agricultural economy.
- **Merced County General Plan: Housing Element (2010)**—Goal HE-5. The Central Valley Wye alternatives would be inconsistent with this goal, which is intended to preserve existing housing stock and established neighborhoods.
- **Madera County General Plan: 2016–2024 Housing Element Update (2015)**—Goal 3. The Central Valley Wye alternatives would be inconsistent with this goal, which is intended to preserve existing housing stock and established neighborhoods.
- **City of Chowchilla 2040 General Plan (2011)**—Objectives LU2, LU3. The Central Valley Wye alternatives would be inconsistent with these objectives, which are intended to preserve existing housing stock and established neighborhoods. Objectives OS 8, and OS 9. The Central Valley Wye alternatives would be inconsistent with these objectives, which are

concerned with preservation of natural resources and agricultural lands, as well as the associated agricultural economy.

- **City of Chowchilla 2040 General Plan, Housing Element (2017)**—Objective A of Goal 4. The Central Valley Wye alternatives would be inconsistent with this objective, which is intended to preserve existing housing stock and established neighborhoods.

Further details and reconciliations are discussed in Appendix 3.12-A. As a state agency, the Authority is not required to be consistent with these policies. Therefore, while inconsistencies would be minimized, they would not be entirely reconciled. Although the Central Valley Wye alternatives would be inconsistent with these specific provisions, they would be consistent with the public and environmental health and safety objectives of these ordinances and plan policies. For example, the Central Valley Wye alternatives would include AG-IAMF#3, Farmland Consolidation Program, which would minimize impacts on agricultural farmland by administering a farmland consolidation program to sell remnant agricultural parcels to neighboring landowners for combining with adjacent farmland properties and continued agricultural productivity. Similarly, SO-IAMF#2, Compliance with Uniform Relocation Assistance and Real Property Acquisition Policy Act, and SO-IAMF#3, Relocation Mitigation Plan, would provide relocation assistance and develop a relocation mitigation plan, designed to minimize disruption to individuals and community cohesion related to relocation.

3.12.4 Methods for Evaluating Impacts

The evaluation of impacts on socioeconomics and communities is a requirement of NEPA and CEQA. The following sections summarize the RSAs and the methods used to analyze impacts on socioeconomics and communities. Additional details on these methodologies can be found in the Community Impact Assessment (Authority and FRA 2016a) and the Draft Relocation Impact Report (Authority and FRA 2016b). As summarized in Section 3.12.1, Introduction, nine other sections describe methods used to analyze impacts on resources that are relevant to socioeconomics and communities.

3.12.4.1 Definition of Resource Study Areas

As defined in Section 3.1, Introduction, RSAs are the geographic boundaries in which the environmental investigations specific to each resource topic were conducted. The RSAs for impacts on socioeconomics and communities include the project footprint for each of the Central Valley Wye alternatives. The RSAs also include adjoining areas that might be indirectly affected. RSA boundaries vary for communities, displacements and relocations, and economic impacts. Table 3.12-2 describes these 12 socioeconomics and communities RSAs, and includes a general definition and boundary definition for each RSA.

Table 3.12-2 Definition of Resource Study Areas

Resource	General Definition	RSA Boundary Definition
Communities		
Direct Impacts	The area needed to construct, operate, and maintain all permanent HSR features, and the area within which impacts would occur on transportation, community cohesion, residences, businesses, communities, health and safety, and the economy.	Central Valley Wye alternatives' project footprints Footprints of EINU components (See detailed Project Description maps in Appendix 2-D, Electrical Interconnections and Network Upgrades)

Resource	General Definition	RSA Boundary Definition
Indirect Impacts	The area within which impacts would occur on transportation, community cohesion, residences, businesses, communities, health and safety, and the economy.	Within a 0.5-mile radius of the alternative's centerline and other HSR infrastructure, including the entire city of Chowchilla, and all of the unincorporated communities of Fairmead and Madera Acres; and within a 0.5-mile radius of the centerline of 230 kV transmission lines in the cities of Waterford and Merced
Displacements and Relocations¹		
Displacements	Portions of communities in which displacements would occur	Privately held residential, commercial, industrial, and agricultural properties (i.e., assessor's parcels) that fall within the Central Valley Wye alternatives' project footprints
Relocations (Residential, Commercial, Industrial, and Community Facilities)	Communities and unincorporated areas where residential, commercial, industrial businesses and community facility displacements would occur and nearby cities and communities with similar characteristics where displaced residents and businesses could relocate	The city of Chowchilla, the communities of Fairmead and Madera Acres, and unincorporated Merced and Madera Counties
Relocations (Rural-Residential and Agricultural Properties)	Unincorporated areas where rural-residential and agricultural property displacement would occur and lands with similar characteristics (e.g., type, size, and configuration of property) where displaced rural-residents and agricultural operations could relocate	Areas in Merced and Madera Counties within approximately 15 miles of the Central Valley Wye alternatives' project footprints ²
Confined Animal Agriculture	Dairy operations, poultry farms, or other confined animal facilities (cattle feedlot and hog feedlot) as well as associated land areas for growing forage crops and receiving wastewater that would be converted	Confined animal facilities within the Central Valley Wye alternatives' project footprints
Economic Impacts		
Overall Economic Impacts	The area within which economic impacts on fiscal revenues, job creation, and the agricultural economy would occur	Two-county region of Merced and Madera Counties, with employment impacts extending to Fresno County because of proximity of the labor force
School District Funding	School districts for which funding would be affected by residential displacements and property tax revenue changes	The boundaries of all school districts traversed by the Central Valley Wye alternatives' project footprints
Agricultural Farmland	Agricultural farmland that could be directly or indirectly acquired and converted to nonagricultural use	Agricultural farmland within the Central Valley Wye alternatives' project footprints, including parcels identified as severed parcels not viable for agricultural use ³

Resource	General Definition	RSA Boundary Definition
Protected Farmland	Williamson Act or FSZ contract lands that may be forced into contract nonrenewal and result in tax-break loss implications	Williamson Act or FSZ contract lands within the Central Valley Wye alternatives' project footprints
Confined Animal Agriculture	Dairy operations, poultry farms, or other confined animal facilities that would be affected by construction and operations noise and vibration associated with the Central Valley Wye alternatives	Confined animal facilities that fall within 100 feet of the Central Valley Wye alternatives' footprints (construction impacts) and within 100 feet of the Central Valley Wye alternatives' centerlines (operations impacts)
Grazing Animals	Lands where grazing animals could be affected by noise and vibration from Central Valley Wye alternatives' operations	Grazing land within 100 feet of the Central Valley Wye alternatives' centerlines

Source: Authority and FRA, 2018

RSA = resource study area

HSR = high-speed rail

FSZ = Farmland Security Zone

EINU = electrical interconnections and network upgrades

¹ There would be no displacements or relocations associated with implementation of the electrical interconnections and network upgrades (EINU). The RSA for displacements and relocations therefore does not include areas of Fresno County, Stanislaus County, or the cities of Merced or Waterford.

² The relocation RSA extends 15 miles from the Central Valley Wye alternatives' project footprints, and is composed of contiguous agricultural areas, uninterrupted by urban areas, with properties of similar type/size/configuration to those displaced. This differs from the 30-mile relocation RSA used for the Merced to Fresno Final EIR/EIS, but as sufficient replacement properties were available within the 15-mile relocation RSA for the Central Valley Wye alternatives, this boundary was not expanded farther.

³ Severed parcels not viable for agricultural use are defined as parcels smaller than 20 acres that would likely be converted to non-agricultural use because of restricted or eliminated access; irregular shapes or small sizes; locations that limit consolidation with adjacent agricultural parcels; or severances that would cause an overall hardship in maintaining economic activity.

3.12.4.2 Impact Avoidance and Minimization Features

As noted in Section 2.2.3.7, Impact Avoidance and Minimization Features, the Central Valley Wye alternatives incorporate standardized IAMFs to avoid and minimize impacts. The Authority would incorporate IAMFs during project design and construction, and, as such, the analysis of impacts of the Central Valley Wye alternatives in this chapter factors in all applicable IAMFs.

Appendix 2-B, California High-Speed Rail: Impact Avoidance and Minimization Features, provides a detailed description of IAMFs that are included as part of the Central Valley Wye alternatives design. IAMFs applicable to environmental or community resources that have the potential to communities include:

- NV-IAMF#1, Noise and Vibration
- AVR-IAMF#1, Design Standards
- AVR-IAMF#2, Context-Sensitive Solutions
- AVR-IAMF#3, Design Review Process
- SO-IAMF#1, Construction Management Plan
- SO-IAMF#2, Compliance with Uniform Relocation Assistance and Real Property Acquisition Policies Act
- SO-IAMF#3, Relocation Mitigation Plan
- AG-IAMF#2, Permit Assistance
- AG-IAMF#3, Farmland Consolidation Program

- TR-IAMF#1, Protection of Public Roadways during Construction
- TR-IAMF#2, Construction Transportation Plan
- TR-IAMF#3, Off-Street Parking for Construction-Related Vehicles
- TR-IAMF#4, Maintenance of Pedestrian Access
- TR-IAMF#5, Maintenance of Bicycle Access
- TR-IAMF#6, Restriction on Construction Hours
- TR-IAMF#7, Construction Truck Routes
- TR-IAMF#8, Construction during Special Events
- TR-IAMF#9, Protection of Freight and Passenger Rail during Construction
- TR-IAMF#10, Maintenance of Transit Access
- AQ-IAMF#1, Fugitive Dust Emissions
- AQ-IAMF#2, Selection of Coatings
- HMW-IAMF#1, Transport of Materials
- HMW-IAMF#2, Permit Conditions
- HMW-IAMF#3, Environmental Management System
- HMW-IAMF#4, Spill Prevention
- HMW-IAMF#5, Undocumented Contamination
- HMW-IAMF#6, Demolition Plans
- HMW-IAMF#7, Property Acquisition Phase I Assessments and Associated Testing and Remediation
- HMW-IAMF#8, Work Barriers
- HMW-IAMF#9, Landfill
- HMW-IAMF#10, Hazardous Materials Plans
- HMW-IAMF#11, Hazardous Minerals
- HMW-IAMF#12, Gas Monitoring
- SS-IAMF#1, Construction Safety Transportation Management Plan
- SS-IAMF#2, Safety and Security Plans

3.12.4.3 Methods for NEPA and CEQA Impact Analysis

This section describes the sources and methods the Authority and FRA used to analyze potential impacts from implementing the Central Valley Wye alternatives on communities, residents, businesses, agricultural operations, community facilities, and the local economy. These methods apply to both NEPA and CEQA unless otherwise indicated. Refer to Section 3.1.3.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA and CEQA. As described in Section 3.12.1, and in the following discussions, the Authority and FRA have applied the same methods and many of the same data sources as the Merced to Fresno Final EIR/EIS to this Draft Supplemental EIR/EIS. Refer to the Community Impact Assessment (Authority and FRA 2016a) and the Draft Relocation Impact Report (Authority and FRA 2016b) for more information regarding the methods and data sources used in this analysis. Laws, regulations, and orders (see Section 3.12.2) pertaining to socioeconomics and

communities were also considered in the evaluation of impacts on communities, residents, businesses, agricultural operations, community facilities, and the local economy.

Communities—Disruption and Division

The California Department of Transportation (Caltrans) defines community cohesion as “the degree to which residents have a ‘sense of belonging’ to their neighborhood. Cohesion refers to the degree of interaction among the individuals, groups, and institutions that make up the community” (Caltrans 1997). Community cohesion takes into consideration access and linkages, community facilities, and local businesses in the surrounding area that provide opportunities for residents to gather and interact. For this analysis, the evaluation of impacts related to community disruption and division considered changes in community cohesion through the potential for the Central Valley Wye alternatives to create visual and functional barriers to community interactions. Much of the basis for the discussion of potential community disruption and division impacts in this section relates to impacts described in other sections of this Draft Supplemental EIR/EIS, such as impacts in Sections 3.2, 3.3, 3.4, 3.14, and 3.16. Impacts on these resources do not necessarily constitute an impact on community cohesion; rather, these impacts are considered to assist in making a determination whether there would be community division or disruption impacts.

In addition to considering impacts described in other resource sections, analysts collected and reviewed community data for the four-county region of Merced, Madera, Fresno, and Stanislaus Counties, the cities of Chowchilla, Merced, and Waterford, and the unincorporated communities of Fairmead and Madera Acres. There are no communities located within the portion of the communities RSA in Fresno County. Analysts used a variety of data sources to quantify current conditions and trends related to population and demographics, income, and housing. Information and data were obtained from the 2000 and 2010 U.S. Census Bureau decennial censuses; the 2010–2014 U.S. Census Bureau American Community Survey (ACS); the California Department of Finance; the Geographic Names Information System (USGS 2013); and county and city planning agencies. Decennial census data used for this analysis includes the 2000 and 2010 Summary File 1 (SF-1)³ and 2000 Summary File 3 (SF-3).⁴ The 2000 and 2010 SF-1 data is generally comparable, while data from the 2000 SF-3 is general comparable to the ACS.⁵ When available, 2010–2014 U.S. Census Bureau ACS 5-Year Estimates were used because it is the most reliable and current data source, and the multiyear estimates provide for greater accuracy and lower margins of error compared to single-year estimates. Community data are presented in Section 3.12.5, Affected Environment, from west to east and north to south. The data allows for an examination of community factors and comparison of communities within the RSAs for communities, displacements and relocations, and economics.

To evaluate potential impacts on communities, the analysts performed the following quantitative and qualitative analyses:

- Conducted an intensive review of aerial photographs and geographic information systems (GIS) data layers showing the spatial relationship between the Central Valley Wye alternatives and existing community resources. Analysts then assessed whether implementation of the Central Valley Wye alternatives would result in temporary or permanent barriers that could isolate portions of a community, separate residents from important community facilities or services, or alter access to such resources.

³ SF-1 presents 100-percent population and housing data for the total population and for racial and ethnic categories, and includes demographic data such as sex, age, race, Hispanic or Latino origin, household relationship, household type, household size, family type, family size, group quarters, and housing data such as occupancy status, vacancy status, and tenure.

⁴ SF-3 presents information from a survey sample that received the long-form census questionnaire, and contains detailed tables of social, economic, and housing characteristics compiled. This data was no longer collected as part of the decennial census beginning after 2000.

⁵ The ACS began collecting ongoing survey samples of demographic, social, economic, and housing characteristics after the 2000 decennial census. Data is released in the form of both single-year and multiyear estimates.

- Evaluated the potential for relocations of households, businesses, and community facilities or the potential to alter the physical shape, character, or function of communities or neighborhoods.
- Examined indirect impacts on homes, businesses, or community facilities and services that would not be displaced by the Central Valley Wye alternatives construction or operations but would remain in close proximity to the HSR alignment.

As construction and operations impacts are generally localized in specific communities, analysts evaluated potential impacts associated with the Central Valley Wye alternatives at the community or neighborhood levels. Impacts on the broader agricultural economy were also considered, because the Central Valley Wye alternatives are located in one of the most productive agricultural regions in the United States. Analysts assessed benefits of the Central Valley Wye alternatives on a regional scale because benefits would accrue to the entire region.

Displacements and Relocations

Analysts identified property displacements through an intensive review of GIS data, such as County Assessor's parcel maps and other public information (e.g., U.S. Geological Survey, Geographic Names Information System data), presenting the spatial relationship between the Central Valley Wye alternatives, the existing parcel boundaries, and the structures located on affected parcels. Specifically, GIS overlays included the area of the Central Valley Wye alternatives' project footprints, aerial imagery of current structure locations, and county parcel data providing Assessor's Parcel Numbers, ownership information, parcel size, land use designations, and structure characteristics such as address and square footage. Analysts used this information to:

- Identify parcels within the Central Valley Wye alternatives' project footprints.
- Determine the need for full or partial acquisition of affected parcels.
- Count the number and characterize the types of structures displaced.

Data received from the county were sometimes incomplete; in these cases, site visits and aerial photographs were used to obtain supplemental information. Site visits were conducted from roadways and publicly accessible areas adjacent to the parcels, and the information collected included observed land use, business names, number of structures on parcels, and number of units in the structures. Analysts used aerial photographs from Google Earth Pro and Google Street View (dated 2015) to obtain additional information for private properties not visible from adjacent roadways. This was the best publicly available imagery at the time of the analysis, and because of the comparatively slow rate of development within rural areas of Merced and Madera Counties, is representative of current conditions within the displacement RSA.

Right-of-way specialists evaluated the potential for each parcel within the Central Valley Wye alternatives' project footprints to be acquired as a full or partial acquisition. For residential and commercial properties and community facilities, a full acquisition was assumed if the Central Valley Wye alternatives would physically intrude on existing structures or acquire important amenities (e.g., parking, access). Partial acquisition was assumed if the Central Valley Wye alternatives' project footprints would require acquisition of a subset of the parcel but would not affect the primary structure or important amenities, allowing for the continued use of the remnant parcel.

At this stage of design, identifying the individual circumstances surrounding each partial acquisition of parcels is not possible. The final full and partial parcel acquisition decisions would ultimately be determined on a case-by-case basis during the land acquisition and real estate appraisal process for the selected Central Valley Wye alternative. Appendix 3.12-B provides a summary of the rights and benefits of displaces under the Authority's Relocation Advisory Assistance program.

Examination of agricultural property acquisition involved identifying impacts associated with the severance of agricultural parcels and the displacement of agricultural facilities (e.g., wastewater treatment facilities, processing facilities, warehouses, barns, or silos). This analysis also considered adjacent properties with the same owner as larger parcels. Section 3.14 addresses

impacts on Important Farmland and lands protected under Williamson Act and Farmland Security Zone (FSZ) contracts from the conversion of agricultural land to nonagricultural land uses, whereas this socioeconomics and communities analysis focuses on the social and economic impacts of displacing agricultural operations.

Analysts determined the number, type, and characteristics of suitable replacement properties in the displacement RSAs where there would be displaced residences, businesses, and agricultural operations. They subsequently identified available properties for sale or for rent through real estate listings for residential (Zillow 2015; Redfin 2015) and commercial (Loopnet 2015; Showcase 2015) properties within the relocation RSA. The analysis was conducted in August 2015. Therefore, the real estate numbers represent information that was current at that time.

The number and type of available replacement properties within the relocation RSAs were compared with the estimated numbers of displaced residences, businesses, and agricultural operations to identify the likely availability of suitable replacement properties.

Children's Health and Safety

The impacts on children's health and safety from construction and operation of the Central Valley Wye alternatives were determined by reviewing impacts associated with other resource topics (i.e., Section 3.2, Section 3.3, Section 3.4, Section 3.5, Section 3.10, and Section 3.11 of this chapter) and summarizing special risks to children's health and safety associated with these impacts. For the purposes of this analysis, children are defined as the population within the communities RSA under the age of 18. More detailed information regarding children's health and safety risks from the Central Valley Wye alternatives is presented in Appendix 3.12-C.

Economic Impacts

Analysts evaluated economic impacts of the Central Valley Wye alternatives by assessing changes in employment, school district funding, the agricultural economy, and property and sales tax revenue. The following sections describe the methods analysts used to evaluate impacts of Central Valley Wye alternative construction and operations on employment, school district funding, agriculture economy, and property and sales tax revenue.

Employment

To estimate short-term construction employment, analysts conducted new analysis in part based on the original evaluation presented in the Merced to Fresno Final EIR/EIS. The original analysis used the Bureau of Economic Analysis Regional Input-Output Modeling System II and bill of goods method to estimate the region-wide potential direct, indirect, and induced job creation resulting from spending associated with the Central Valley Wye alternatives in the construction and manufacturing sectors.⁶ The current analysis used updated cost estimates for the Central Valley Wye alternatives, as well as updated 2040 employment forecasts for the anticipated 2020 peak year of construction for the Central Valley Wye alternatives.

School District Funding

Analysts assessed financial impacts on school districts by evaluating the potential of the Central Valley Wye alternatives to result in the relocation of students outside of affected school districts, which would reduce district funding. The locations of residential displacements were examined in relation to elementary, secondary, and unified school district boundaries in Merced and Madera Counties to determine the number of residential displacements in each school district. The boundaries of these school districts overlap, because secondary school districts often serve an aggregation of elementary school districts. To be conservative, residential displacements located

⁶ Direct job creation is a measure of those new construction-related jobs that result from building the Central Valley Wye alternatives. Indirect job creation is a measure of new jobs generated in businesses in the area that could supply goods and services to construction contractors, such as equipment suppliers, construction companies, and maintenance firms. Induced job creation is a measure of new jobs in new or existing businesses, such as retail stores, gas stations, banks, restaurants, and service companies, which may supply goods and services to these new direct and indirect workers and their families.

in overlapping school districts were counted in both districts. Analysts estimated the number of affected students in each school district by first multiplying the percentage of school-age children (determined by dividing the number of people 5–19 years old by the total population) in each county by the average household size in the corresponding location (U.S. Census Bureau 2000e, 2000g) to obtain the average number of school-aged children per household. The number of enrolled students in each school district was obtained from the California Department of Education for the 2013–2014 school year (California Department of Education 2015). Analysts then compared the total number of students relocated in a school district with the number of available, suitable replacement housing in the district to determine whether displaced residents may be forced to relocate outside of their current school district.

Analysts also calculated the potential loss of property tax revenue designated for school districts as a result of property acquisition for construction of the Central Valley Wye alternatives. Property acquisition would result in property tax revenue losses because it would reduce the number of properties on the tax rolls of Merced and Madera Counties, regardless of whether a property owner relocates within the same jurisdiction. Property tax losses were based on the value of the properties to be acquired, derived from the *Merced to Fresno Section: Central Valley Wye Right-of-Way Cost Overview Engineering Report* (Authority and FRA 2016e), and the property tax rates for Merced and Madera Counties.

Finally, the locations of potential roadway closures and the construction of new roadway overheads and undercrossings were evaluated in conjunction with the Central Valley Wye alternatives' project footprints to assess potential impacts on school district bus transportation routes and costs. The number of road closures and the additional out-of-direction travel were assessed for each school district.

Agriculture

Analysts evaluated the impacts of land acquisition on agricultural production, agricultural revenue, and agricultural employment within their respective RSAs from construction of the Central Valley Wye alternatives and the associated electrical interconnections and network upgrades (EINU),⁷, specifically as a result of the following:

- Parcel acquisition, including the creation of noneconomic remnant parcels of Important Farmland related to severance associated with construction. Multiple criteria (e.g., access, parcel size and shape, ownership) were considered to determine which of the potential remnant parcels of Important Farmland likely could remain in agricultural use.
- Potential changes in tax status of Williamson Act and FSZ contracts as a result of partial parcel acquisition associated with construction.
- Permitting needs for new wastewater treatment lands as a result of parcel acquisition of permitted wastewater treatment lands.
- Noise and vibration impacts on confined animals and grazing animals associated with construction and operations that are within 33 to 44 feet from the centerline of the tracks.

Analysts calculated a dollar-value estimate of reduced agricultural production and used state and county data on jobs generated per dollar of revenue to estimate the corresponding potential direct agricultural job loss for these revenue reductions. Analysts obtained data addressing the locations of particular crop production and animal operations from the California Department of Water Resources land use survey and estimated the value of agricultural production affected by property acquisition by using county price data for affected crops and animals. Analysts then used California Employment Development Department (CEDD) data that provides the total number of agricultural jobs in California aggregated for each type of crop to estimate job loss.

⁷ EINU are included in this discussion because parcel acquisition of approximately 3 acres of agricultural lands would be required to support the Site 6—El Nido, El Nido Substation, common to all Central Valley Wye alternatives.

Refer to the Community Impact Assessment (Authority and FRA 2016a) for a full description of the methods for analyses and detailed results.

Property and Sales Tax Revenue Changes

Analysts estimated the potential impacts of the Central Valley Wye alternatives on property tax revenues collected by county and city jurisdictions based on permanent property acquisitions. These potential impacts were estimated quantitatively as the estimated reduction in property tax revenue for county and city budgets resulting from the permanent removal of properties from the tax rolls. The value of property acquisitions was derived from the *Merced to Fresno Section: Central Valley Wye Right-of-Way Cost Overview Engineering Report* (Authority and FRA 2016e), *Preliminary Potential Relocation Impacts Analysis* (ARWS 2016), and from the County Assessor data for each respective county (Parcelquest 2016). Analysts applied the property tax rates for the county general fund to the total value of property acquisitions for each county. These property tax revenues were then compared to each county's fiscal year (FY) 2013/2014 general fund property tax revenues. This assessment looked at changes in sales tax revenues during the first few years following the start of construction, as well as the anticipated long-term change during operations. The analysis of short-term impacts assessed the temporary changes in sales tax revenues from the acquisition of commercial and industrial properties as these businesses relocate and re-establish themselves. Sales tax revenues during construction were estimated using the sales tax rates specific to each county and the estimated local expenditures on equipment and materials for each year of construction.⁸ The long-term assessment of sales tax revenues examined the ongoing sales tax revenues that could result from the purchase of goods and services associated with the continued operations and maintenance of the Central Valley Wye alternatives and from new economic development through improved connectivity with the rest of the state. See the Community Impact Assessment (Authority and FRA 2016a) for details on this methodology.

3.12.4.4 Determining Significance under CEQA

CEQA requires that an EIR identify the significant environmental impacts of a project (CEQA Guidelines § 15126). One of the primary differences between NEPA and CEQA is that CEQA requires a significance determination for each impact using a threshold-based analysis (see 3.1.3.4, Methods for Evaluating Impacts, for further information). By contrast, under NEPA, significance is used to determine whether an EIS will be required; NEPA requires that an EIS is prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." Accordingly, Section 3.12.9, CEQA Significance Conclusions, summarizes the significance of the environmental impacts on socioeconomics and communities for each Central Valley Wye alternative. The Authority is using the following thresholds to determine if a significant impact on socioeconomics and communities would occur as a result of the Central Valley Wye alternatives. A significant impact is one that would:

- Physically divide an established community.
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Relocate substantial numbers of people, necessitating the construction of replacement housing elsewhere.
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or with the need for new or physically altered community and governmental facilities, the construction of which could cause significant environmental impacts.

The analysis in this section, in accordance with NEPA, discusses project impacts on the economy, including impacts on employment, school district funding, agriculture economy, and

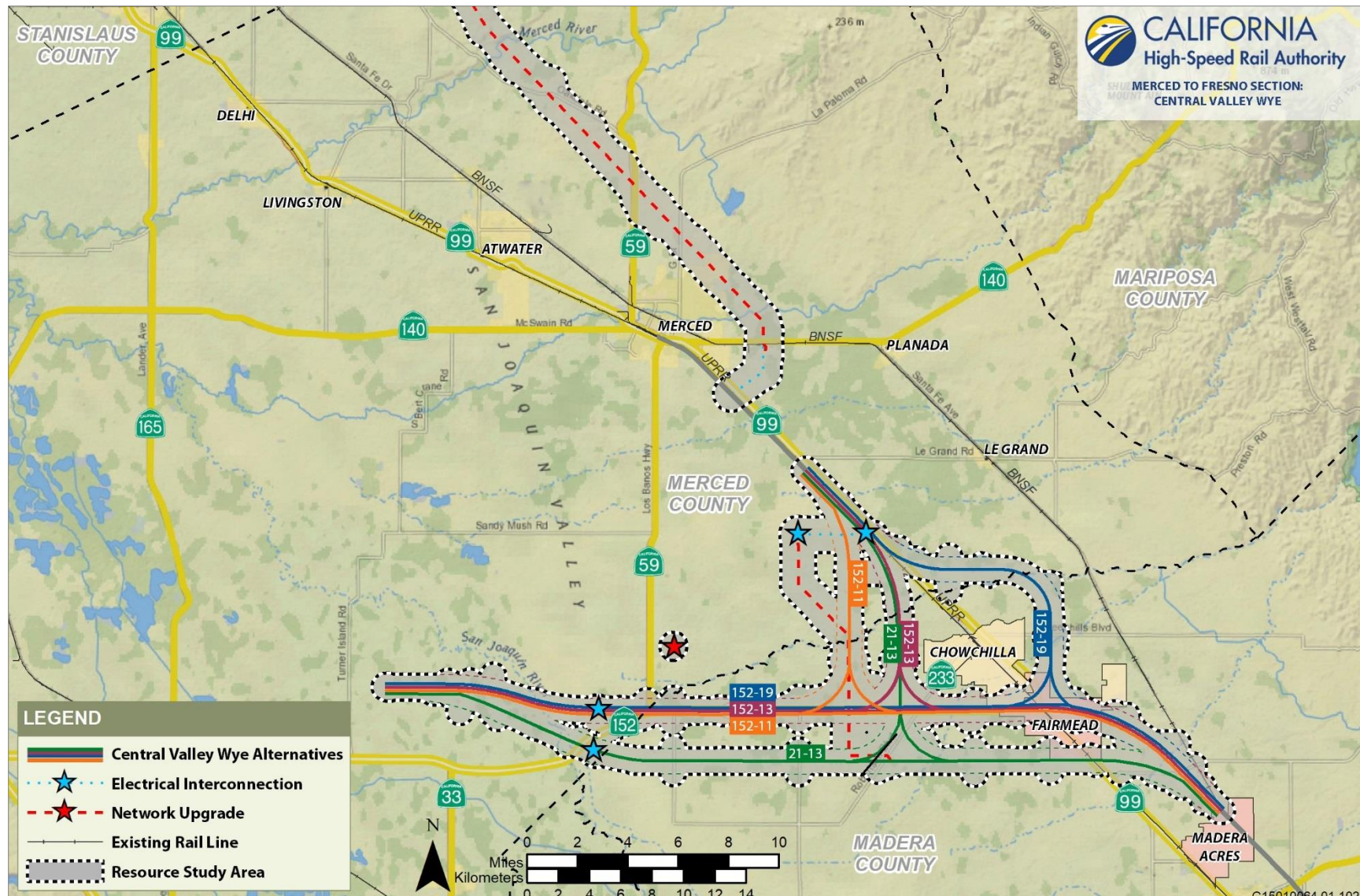
⁸ A sufficient level of detail was not available for engineering of EINU components to determine reasonable cost estimates and associated sales tax revenues.

property and sales tax revenue. In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA significance criteria are provided for economic impacts.

In accordance with U.S. Presidential Executive Order 13045, Protection of Children from Environmental Health and Safety Risks, this analysis provides an assessment of potential environmental health and safety risks that may have a disproportionate impact on children. There is no specific requirement in California for this analysis and no CEQA significance criteria exist that separately address impacts on children. However, the analyses of other environmental impacts assess potential impacts on sensitive receptors (including children and places children congregate, such as schools and parks) and other elements of the environment, including facilities particularly used by children (e.g., school buses, pedestrian and bicycle routes). Therefore, the analysis in this section summarizes the CEQA significance conclusions from other resource topics related to specific impacts on children.

3.12.5 Affected Environment

This section describes the affected environment for socioeconomics and communities, including the existing demographic, housing, economic conditions, and community characteristics within the region and the communities within the RSAs for communities, displacements and relocations, and economics. It also discusses changes to socioeconomics and communities in the San Joaquin Valley since publication of the Merced to Fresno Final EIR/EIS. This information provides the context for the environmental analysis and evaluation of impacts. Additional information on communities can be found in the Community Impact Assessment (Authority and FRA 2016a). Figure 3.12-1 illustrates the location of the Central Valley Wye alternatives in relation to these communities.



Source: ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

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Figure 3.12-1 Central Valley Wye Alternatives' Communities Resource Study Areas

3.12.5.1 Population Characteristics

Population and demographic characteristics provide information about the Merced-Madera County region's social setting. Age, household, and disability characteristics are discussed to identify potential special relocation needs. Information regarding race and income is briefly summarized to identify minority and low-income populations. Additional discussion of minority and low-income populations is presented in Chapter 5, Environmental Justice, and the Community Impact Assessment (Authority and FRA 2016a).

Information on population characteristics is presented for the regional population, consisting of Merced and Madera Counties, and the local population. The local population includes the cities and communities within the communities RSA, including Merced, Chowchilla, Fairmead, and Madera Acres.⁹ The cities and communities are evaluated as a whole, even though they may be located only partially within the 0.5-mile buffer from the Central Valley Wye alternatives' project footprints. For instance, the majority of Chowchilla's population resides more than 0.5 mile from the Central Valley Wye alternatives' project footprints, but the city is included within the communities RSA because the southernmost portion of the city extends to SR 152 and is within 0.5 mile of the SR 152 alternatives' project footprints. Similarly, Madera Acres is located south of Avenue 19, which is the southern limit of the Central Valley Wye alternatives, but is included within the communities RSA because the northernmost portion of the community lies within the 0.5-mile buffer. Fairmead is the only community that resides mostly within the 0.5-mile buffer; the majority of the population resides within 0.5 mile of the SR 152 alternatives.

Regional Population Characteristics

Table 3.12-3 provides information on the existing and projected population growth for Merced and Madera Counties compared to growth for the state of California.¹⁰ The population in the two-county region of Merced and Madera Counties increased over the 2000–2014 period, with a change of 24 percent in each of the two counties (U.S. Census Bureau 2000a, U.S. Census Bureau ACS 2010–2014a). The populations of Merced and Madera Counties are projected to increase through 2040 by 52 and 58 percent, respectively (CDOF 2014). The growth rates in both counties are anticipated to continue to be higher than those of the state of California. A major reason for the growth in the San Joaquin Valley is the overflow of people from urban coastal areas seeking affordable housing near the major metropolitan areas of San Jose and San Francisco.

Table 3.12-3 Past, Present and Projected Populations

Geographic Area	2000 Population	2010 Population	2014 Population	2040 Population Projections	Change in Population 2010–2040 (%)
State of California	33,873,086	37,253,956	38,066,920	47,233,240	27
Counties					
Merced County	210,554	255,793	261,609	389,934	52
Madera County	123,109	150,865	152,452	238,514	58
Regional Total	333,663	406,658	414,061	628,448	55

Source: U.S. Census Bureau 2000a, 2010; U.S. Census Bureau ACS 2010–2014a; CDOF 2014.

⁹ Population characteristics are not presented for the city of Waterford as only minor upgrades to existing power and transmission lines are proposed in this location and such information is not pertinent to the analysis.

¹⁰ The network upgrades are required to assure the availability of reliable electric service to meet the HSR electrical demand. These components are specifically designed to accommodate the existing and planned electrical load growth produced by the HSR, rather than to induce growth. Therefore, the setting does not include information about regional population characteristics for Stanislaus and Fresno Counties, where network upgrades are proposed.

Age distributions in Merced and Madera Counties are similar, and middle-age groups constitute the highest concentration of the population. In 2000, the median age in Merced and Madera Counties was 29.0 and 32.7 years, respectively, and the percentage of the population under 18 was approximately 35 percent in Merced County and 30 percent in Madera County (U.S. Census Bureau 2000b, 2000c). In 2014, the median age in Merced and Madera Counties was 29.6 and 33.3 years, respectively, while the percentage of the population under 18 was approximately 32 percent in Merced County and 28 percent in Madera County (U.S. Census Bureau ACS 2010-2014a).

In 2000, the 99,970 households in the region had an average household size of 3.2 persons.¹¹ In 2014, the number of households increased to 119,239, and the average household size increased to 3.3 persons. Approximately 75 percent of all households in the two-county region were family households; however, the percentage of married-couple households decreased between 2000 and 2014 while the percentage of households headed by a single female or a single male increased across the region (U.S. Census Bureau 2000d; U.S. Census Bureau ACS 2010-2014b).

The U.S. Census Bureau uses the terminology “linguistic isolation” to assess limited English proficient populations.¹² Linguistic isolation among households in the region was slightly greater than that of the state in 2000, inasmuch as 11 percent of regional households and 10 percent of California households contained no member over the age of 14 who speaks only English or speaks English very well (U.S. Census Bureau 2000e). This percentage increased in both the state and the region since 2000, with 21 percent of the households in the region and 19 percent in the state estimated to be linguistically isolated in 2014 (U.S. Census Bureau ACS 2010-2014c).

Disabled populations, particularly the elderly, tend to rely more heavily on community services because of issues with mobility and accessibility. The census data show that disabilities increase significantly in the populations who are 65 and older. Among seniors in Merced and Madera Counties, 47 percent and 44 percent, respectively, were estimated to have a disability in 2014, compared to 36 percent of seniors in California as a whole (U.S. Census Bureau ACS 2010-2014d). The data are collected for many different types of disabilities, and individuals can be identified as having more than one type of disability. Therefore, this number may double-count persons who have more than one type of disability.

Minorities in this analysis are defined as all individuals identified as Hispanic or non-White. The two-county region encompassing Merced and Madera Counties had a large minority population in both 2000 and 2014. Individuals of a non-Hispanic White background made up approximately 43 percent of the region’s population in 2000, while individuals of Hispanic ethnicity of any race made up 45 percent of the population; non-Hispanic, non-White individuals composed the remaining 12 percent (U.S. Census Bureau 2000f). Between 2000 and 2014, the percentages of these two groups shifted, with the total non-Hispanic White population decreasing to about 31 percent and the Hispanic population of all races increasing by 80,000 people. By 2014, persons of Hispanic ethnicity represented 67 percent of the population of the region (U.S. Census Bureau 2010-2014e).

In 2000, the countywide median annual household income was \$35,532 in Merced County, \$36,286 in Madera County, and \$47,493 within the state of California. In 2014, the countywide median annual household income increased to \$43,066 in Merced County, \$45,490 in Madera County, and \$61,489 in the state of California. These numbers represent increases in median annual household income from 2000 of about 21 percent in Merced County and 25 percent in Madera County (U.S. Census Bureau 2000g; U.S. Census Bureau ACS 2010-2014f). In 2014, the population below the poverty level was approximately 22 percent in Merced County and 22 percent in Madera County (U.S. Census Bureau ACS 2010-2014g).

¹¹ Persons who are institutionalized are not counted as being in the total household population. They are, however, included in the total population.

¹² According to the U.S. Census Bureau, a household is linguistically isolated if “no member 14 years old and over speaks only English or speaks a non-English language and speaks English very well. In other words, all members 14 years old and over have at least some difficulty with English.”

Local Population Characteristics

City of Merced

Merced's population of 63,893 in 2000 grew to 81,739 by 2014, which represents an increase in population by 28 percent (U.S. Census Bureau 2000a, U.S. Census Bureau ACS 2010-2014a). The number of households and average size of households in Merced were 24,950 and 3.18, respectively. Approximately 71 percent of the households in Merced were family households (U.S. Census Bureau ACS 2010-2014b). The median household income was \$43,809, and approximately 31 percent of the population was below the poverty level (U.S. Census Bureau ACS 2010-2014f, 2010-2014g).

As shown in Table 3.12-4, in 2014, approximately 49 percent of the population identified as Hispanic, and approximately 69 percent of the population identified as an ethnic or racial minority (U.S. Census Bureau ACS 2010-2014e).

Table 3.12-4 Minority Group Representation 2010–2014

Location	Percentage of Population					Total
	Hispanic of All Races	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African American	Non-Hispanic Other	
Merced County	56	<1	7	3	<1	69
Madera County	55	1	2	3	<1	63
Regional Total	56	1	5	3	<1	67
City of Merced ¹	49	1	12	5	2	69
City of Chowchilla	39	1	2	12	2	58
Community of Fairmead	60	<1	1	4	15	80
Community of Madera Acres	66	0	2	2	0	70

Source: U.S. Census Bureau ACS 2010-2014e

This analysis includes populations that reported a single race alone (as opposed to a race in combination with one or more other race groups).

¹ Demographic information is provided for the city of Merced because there are new permanent electrical features proposed within the city. Fresno County, Stanislaus County, and Waterford are not included as only minor upgrades to existing power and transmission lines are proposed and such information is not pertinent to the analysis.

City of Chowchilla

Chowchilla's population of 11,127 in 2000 grew to 18,934 in 2014, resulting in an annual growth rate of 3.9 percent (U.S. Census Bureau 2000a; U.S. Census Bureau ACS 2010-2014a).

The number of households and the average household size in Chowchilla were 3,873 and 2.6, respectively, in 2014. Approximately 77 percent of the households in Chowchilla were family households (U.S. Census Bureau ACS 2010-2014b). The median household income was \$36,852, and approximately 30 percent of the population was below the poverty level (U.S. Census Bureau ACS 2010-2014f, 2010-2014g).

As shown in Table 3.12-4, in 2014, Chowchilla had the lowest percentage of Hispanics and minority populations within the communities RSA. Approximately 39 percent of the population identified as Hispanic, while 58 percent of the population identified as an ethnic or racial minority. Chowchilla has a significant African American population (approximately 12 percent) compared to Merced and Madera Counties (approximately 3 percent) (U.S. Census Bureau ACS 2010-2014e). Linguistic isolation in Chowchilla was 5 percent in 2014 (U.S. Census Bureau ACS 2010–2014c).

Community of Fairmead

The rural-residential community of Fairmead is located southeast of Chowchilla. Fairmead has the smallest population of the communities within the communities RSA, with 1,983 people in 2014 (U.S. Census Bureau ACS 2010-2014a). Because Fairmead attained the status of a census-designated place in 2010, no previous census data are available to estimate the community's growth rate or demographic trends.

According to the 2014 ACS 5-Year Estimates, Fairmead consists of 401 households with an average household size of 3.3, with approximately 82 percent being family households (U.S. Census Bureau ACS 2010–2014b). The median household income was \$31,058 and 39 percent of the population lived below the poverty level (U.S. Census Bureau ACS 2010–2014f, 2010-2014g).

Fairmead had a minority group representation of 80 percent in 2014. The largest minority group was Hispanics, which accounted for 60 percent of the total population (U.S. Census Bureau ACS 2010–2014e). However, according to ACS data on linguistic isolation, 7 percent of Fairmead households were linguistically isolated in 2014 (U.S. Census Bureau ACS 2010–2014c).

Community of Madera Acres

The population in Madera Acres grew 25 percent from 7,741 in 2000 to 9,653 in 2014. Madera County had a population increase of 24 percent over the same period (U.S. Census Bureau 2000a; U.S. Census Bureau ACS 2010-2014a).

In 2014, the number of households in Madera Acres was 2,416, and the average household size was 3.1. The percentage of family households is the highest in the communities RSA, with approximately 85 percent of the households belonging to families (U.S. Census Bureau ACS 2010-2014b). Madera Acres also has the highest median household income (\$60,529) of all jurisdictions in the communities RSA (U.S. Census Bureau ACS 2010-2014f).

Similar to the other communities in the communities RSA, Madera Acres had a high minority population of approximately 70 percent in 2014, and approximately 6 percent of households were linguistically isolated (U.S. Census Bureau ACS 2010–2014c, 2010-2014d).

3.12.5.2 Housing Setting

This section provides details on housing. Specifically, it covers housing structure types, community tenure, and vacancy rates, which are all useful in understanding the availability of suitable housing in areas where residential property displacements would occur with implementation of the Central Valley Wye alternatives.¹³

Regional Housing Setting

The single-family home is the predominant housing type in the two-county region; accounting for approximately 77.0 percent of the existing units in 2014 (U.S. Census Bureau ACS 2010–2014h). Multifamily units and mobile homes accounted for 17.0 percent and 5.8 percent of the housing stock, respectively. A remaining 0.2 percent of the population is housed in boats, recreational vehicles, or vans. Table 3.12-5 is a summary of housing characteristics for 2014, including vacancy rates for the region. Madera County is unique because approximately 6 percent of the population is housed in group quarters, including two state prison facilities located in the eastern portion of Chowchilla. The housing data in Table 3.12-5 exclude these group quarters.

¹³ The EINU would not result in any impacts on housing; therefore, the setting does not include information about Stanislaus or Fresno Counties, or the cities of Merced and Waterford where the EINU are proposed.

Table 3.12-5 Housing Characteristics in 2014 (Estimated)

Location	Total	Single-Family (1 unit)		Multifamily (2 or more units)		Other (e.g., boat, RV, van)		Mobile Home	
	Number	Number	Percent	Number	Percent	Number	Percent	Number	Percent
County									
Merced	83,904	62,231	74.2	16,586	19.8	125	0.1	4,962	5.9
Madera	49,499	40,532	81.9	6,053	12.2	122	0.2	2,792	5.6
Region	133,403	102,763	77.0	22,639	17.0	247	0.2	7,754	5.8
City or Community in Resource Study Area									
Chowchilla	4,337	3,650	84.2	607	14.0	NA ¹	NA ¹	80	1.8
Fairmead	505	391	77.4	13	2.6	NA ¹	NA ¹	101	20.0
Madera Acres	2,538	2,529	99.6	9	0.4	NA ¹	NA ¹	0	0

Source: U.S. Census Bureau ACS, 2010-2014h

Notes: Region is Merced and Madera Counties. Boats, RVs, vans, and other housing units are included under Mobile Homes. RV = recreational vehicle¹ Data not available.

In addition to data describing housing stock, ownership and residency tenure data are provided in Table 3.12-6 to help illustrate levels of community cohesion within the displacements and relocations RSAs. Community cohesion refers to the sense of belonging and commitment that residents have to their communities. High levels of home ownership, low residential unit turnover, and the presence of public facilities, among other community characteristics, are signs of a potentially high level of community cohesion (Caltrans 2011).

Table 3.12-6 Housing Tenure and Vacancy (2014)

Geographic Area	Housing Units						Vacancy Rate (percent)	
	Owner-Occupied		Renter-Occupied		Total Vacant		Home-Owner	Renter
	Number	Percent	Number	Percent	Number	Percent		
County								
Merced County	40,310	48.0	36,206	43.2	7,388	8.8	2.2	6.5
Madera County	25,930	52.4	16,793	33.9	6,776	13.7	2.4	5.1
Regional Total	66,240	52.6	52,999	42.1	14,164	5.4	2.3	6.0
City or Community in the Resource Study Area								
Chowchilla	1,879	43.3	1,994	46.0	464	10.7	0.8	6.7
Fairmead	182	36.0	219	43.4	104	20.6	0	0
Madera Acres	1,962	77.3	454	17.9	122	4.8	1.0	0

Source: U.S. Census Bureau ACS, 2010-2014h

Local Housing Setting

City of Chowchilla

In 2014, the housing stock of Chowchilla was similar to that of the region, with single-family homes making up an estimated 82.9 percent of the total housing units. Chowchilla, the largest and most developed community along the Central Valley Wye alternatives, had the highest estimated percentage of multifamily units (16.5 percent). In 2014, approximately 43 percent of Chowchilla's housing units were owner-occupied, 46 percent were renter-occupied, and 10.7

percent were vacant. Between 2000 and 2014, homeownership rates decreased by about 6 percent, while vacancy rates increased by 6 percent (U.S. Census Bureau 2000a; U.S. Census Bureau ACS 2010–2014h). As a result, Chowchilla had the lowest homeownership rate and the highest vacancy rate of the communities in the relocations RSA. In 2014, Chowchilla’s vacancy rate was 0.8 percent for homeowners and 6.7 percent for renters. In 2014, 86 percent of residents in occupied housing units in Chowchilla had moved into their homes since 2000, while 6.1 percent of households were more established, having lived in the same residence since at least 1990. These percentages indicated a higher rate of housing turnover in Chowchilla than in Madera County, where 70 percent of residents had moved in since 2000, and 14 percent had been there since 1990. In Merced and Madera Counties, the percentages were 72 percent and 13 percent, respectively (U.S. Census Bureau ACS 2010–2014h).

Community of Fairmead

Fairmead had approximately 505 housing units in 2014. Of these, only 70 percent were single-family residences, the lowest percentage in the relocations RSA. The percentage of mobile homes is greater than other communities within the relocations RSA, with 25 percent of housing units consisting of mobile homes (U.S. Census Bureau ACS 2010-2014h).

Compared to Chowchilla, Fairmead had a lower percentage of owner-occupied residential units, and a higher percentage of vacant residential units. Approximately 21 percent of housing units within Fairmead were vacant, almost double that of Chowchilla and quadruple that of Madera Acres. However, notably, the homeowner and rental vacancy rates in Fairmead were 0 percent in 2014. These vacancy rates illustrate that there are few vacant housing units on the market for rent or for sale within Fairmead (U.S. Census Bureau ACS 2010–2014h).

In terms of residence turnovers, Fairmead is comparable to Madera County. Approximately 77 percent of residents in occupied housing units have moved into their homes since 2000, while approximately 3 percent are more established, having lived in the same residence since at least 1990 (U.S. Census Bureau ACS 2010–2014h).

Community of Madera Acres

As shown in Table 3.12-5, the community of Madera Acres’ housing inventory is different from that of Madera County and the region because almost all of the housing units are single-family residences (99.6 percent), which reflects the more suburban nature of the community. There are 9 multifamily units and no mobile homes in Madera Acres.

The community of Madera Acres has the highest rate of home ownership in the relocations RSA, with approximately 77 percent of the households owner-occupied in 2014. The total vacant housing units in Madera Acres is approximately 4.8 percent, less than approximately one-half the percentage of vacant properties of the other communities in the relocations RSA (U.S. Census Bureau ACS 2010–2014h).

Residence turnover has been relatively low in Madera Acres. Only 53 percent of residents in occupied housing units in Madera Acres have moved into their homes since 2000, and 20 percent of households have lived in the same unit since at least 1990 (U.S. Census Bureau ACS 2010–2014h). This suggests that the population of Madera Acres is more stable than other communities in the relocations RSA.

3.12.5.3 Economic Setting

Regional Economic Setting

Because agriculture has historically been the main industry in the region, many jobs in the two-county region are still related to this sector (e.g., food processing, manufacturing, warehousing, and distribution). Levels of employment and income in the region have historically lagged behind other parts of the state as a result of the seasonal nature of agricultural employment and slower growth in nonagricultural sectors. Merced and Madera Counties contain some of the most agriculturally productive areas in California, and farming is a primary economic factor in the two counties. In 2014, Merced and Madera Counties ranked fifth and ninth, respectively, in total

agricultural production value in California. Cumulatively, these counties accounted for about \$6.7 billion (13 percent) of the total \$53.5 billion agricultural revenue generated in the state in 2014 (CDFA 2015).¹⁴

Although this region has significant agricultural revenues, the regional economy has been diversifying to become more oriented toward the services-sector industry. Growth in employment across sectors came as a result of the real estate boom in the early 2000s, which generated many jobs in construction, fueled retail sales, and generated increased property sales and tax revenues (Cowan 2005).

However, the San Joaquin Valley was highly affected by the 2007 real estate market decline and subsequent economic recession. As a result of the recession, some counties and cities experienced increases in unemployment and foreclosure rates and sharp declines in housing prices (Bertaut and Pounder 2009). Unemployment rates in 2014 were 18 percent in Merced County and 9.5 percent in Madera County (U.S. Census Bureau ACS 2010–2014i). The Community Impact Assessment (Authority and FRA 2016a) contains more detailed information on the regional economic setting.

Local Economic Setting

City of Merced

Educational services and health care and social services are the largest occupational sectors in Merced (employing approximately 29 percent of the labor force), followed by the management, business, science, and arts sector (27 percent), and retail trade (12 percent). The unemployment rate for the population of Merced over the age of 16 is 16.9 percent (U.S. Census Bureau ACS 2010–2014i).¹⁵

City of Chowchilla

Educational services and health care and social services are the largest occupational sectors in Chowchilla (employing 22 percent of the employed labor force), followed by agriculture (14 percent). Chowchilla has the lowest unemployment rate of the communities in the overall economic impacts RSA, with 10 percent of the population unemployed (U.S. Census Bureau ACS 2010–2014i).

Community of Fairmead

The largest occupational sector in Fairmead is manufacturing (19 percent), followed by transportation, warehousing, and utilities (14 percent). Educational services accounted for about 12 percent of the work force. Agriculture and finance and insurance/real estate each compose 10 percent of the occupational sector. Fairmead's unemployment rate of 28 percent is the highest in the overall economic impacts RSA (U.S. Census Bureau ACS 2010–2014i).

Community of Madera Acres

In Madera Acres, educational services and health care and social services lead the occupational sector and account for 24 percent of the employed labor force. These sectors are closely followed by agriculture, forestry, fishing and hunting, and mining (12 percent), manufacturing (10 percent), and retail trade (10 percent). The unemployment rate in Madera Acres (6 percent) is lower than the rate in Madera County (U.S. Census Bureau ACS 2010–2014i).

School District Funding

Funding for California's kindergarten (K) through 12 public schools comes primarily from the state budget (60 percent), with local property taxes (23 percent) and the federal government (10

¹⁴ The network upgrades would not result in any permanent impacts on regional employment, income, or other economic factors; therefore, the setting does not include information about Stanislaus or Fresno Counties where the network upgrades are proposed.

¹⁵ The city of Merced is included in the local economic setting because there would be new permanent facilities located within the city that would result in some minor alterations of land use.

percent) as the other significant contributors. Each individual school district’s income is based on the average number of students attending district schools during the year, typically referred to as the average daily attendance (EdSource 2009). Since the academic year 2007–2008, funding per pupil for California K–12 public schools has declined by roughly 15 percent, from \$8,235 per pupil to \$7,038 in 2011–2012. Public schools across California are facing difficult budget issues, and in the years going forward, K–12 funding is anticipated to be vulnerable to significant future cuts. As such, school districts are struggling to hold on to funds they currently receive (EdSource 2011).

Refer to Appendix 3.12-D for detailed information on school district funding.

Agricultural Economic Setting

The Central Valley is the largest area of agricultural production in California, with many of the state’s most agriculturally productive counties. Key crops and agricultural products produced in the Merced/Madera region include grapes, almonds, walnuts, milk, poultry, tomatoes, citrus, and alfalfa hay. This production includes a wide variety of different commodities, with California being the nation’s sole producer of a large number of specialty crops (CDFA 2012). Dairy products were one of the most important agricultural products in both Merced and Madera Counties in 2013 (Madera County 2013, Merced County 2013).¹⁶

Agricultural employment in Merced and Madera Counties is critical and in 2014 accounted for approximately 18.1 percent and 25 percent of all jobs in each county, respectively (CEDD 2015). However, even with the growth in Merced and Madera Counties, there is still a trend of decreasing agricultural employment in the Central Valley because of a decline in small family farms and an increase in larger-scale agricultural operations (CEDD 2009). A December 2005 report notes that data suggest this trend toward larger farms may be accelerating as pressures increase from global competitors and as new agricultural technologies continue to reinforce the substitution of capital for labor to create even greater-scale efficiencies (Cowan 2005).

Williamson Act and FSZ contracts are part of the California Land Conservation Act of 1965 and are described in detail in Section 3.14.1.1, Definition of Resources. A greater amount of land protected under Williamson Act and FSZ contracts exists in Madera County than in Merced County. The acreage of farmland protected under Williamson Act and FSZ contracts within each county are presented in Table 3.12-7. Merced County does not participate in the FSZ program.

Table 3.12-7 Land Under Williamson Act and FSZ Contracts in Merced and Madera Counties (acres)

Type of Contract	Merced County	Madera County
Williamson Act Contract	465,242	478,277
FSZ	0 ¹	59,217
Total	465,242	537,494

Source: Merced County, 2015; Madera County, 2015

FSZ = Farmland Security Zone

¹ Merced County does not participate in the FSZ program.

Most of the Important Farmland in the displacements RSA is zoned for agriculture (see Section 3.13); however, there are no agricultural conservation easements within the Central Valley Wye alternatives’ project footprints. Farmland protected by Williamson Act and FSZ contracts is located along all of the Central Valley Wye alternatives, particularly in the area south and west of Chowchilla (Figure 3.12-2). Confined animal facilities are located along each of the alignments. Appendix 3.12-E provides more detail about specific impacts on confined animal facilities.

¹⁶ The network upgrades would not result in any permanent impacts on the agricultural economy; therefore, the setting does not include information about Stanislaus or Fresno Counties where the network upgrades are proposed.

Tax Revenues

State and local governments were highly affected by the loss of tax revenues that began with the onset of the national recession in 2007. The slowdown in the economy reduced business sales and sales tax revenues to local governments. Property assessment values were reset to lower levels with the sale of foreclosed homes, which resulted in lower property tax revenues. In addition, even homes that had not been resold were subject to temporary property tax reductions linked to Proposition 13.¹⁷ As a result of reduced local government revenues in 2008 and 2009, local governments in the two-county region reduced staff, cut services, and furloughed employees to adjust to available financial resources. Although state and local government have slowly improved with the overall economic recovery, current conditions have been largely influenced by the 2007–2008 recession. As an example of the role that property and sales tax play in local government revenues, Table 3.12-8 summarizes the general fund revenues by source for Merced and Madera Counties, and Chowchilla for fiscal year 2012/2013.¹⁸

Table 3.12-8 Analysis of General Fund Revenues for Fiscal Year 2012/2013

Location	Annual General Fund Revenues	Property Tax as a Percentage of Revenues (%)	Sales Tax as a Percentage of Revenues (%)
Merced County	\$339,981,322	24.8	1.3
Madera County	\$167,506,237	17.8	3.7
City of Chowchilla	\$5,103,070	15.6	20.0

Source: Merced County, 2012; Madera County, 2012; City of Chowchilla, 2012

Local government revenue information is not available for the community of Fairmead, which is part of unincorporated Madera County.

3.12.5.4 Communities and Neighborhoods

Regional Community Setting

This section describes community character and cohesion for the cities of Chowchilla, Waterford, and Merced, and the unincorporated communities of Fairmead and Madera Acres. Community cohesion refers to residents’ sense of belonging to their neighborhood, and takes into consideration established patterns of interactions among community residents, isolation of one part of a community from another, and access to community facilities and services. Several major transportation corridors traverse the region, including SR 152, SR 99, and the BNSF Railway (BNSF) corridor. These transportation corridors separate the communities from each other, and Chowchilla is bisected by SR 99 and the BNSF corridor.

Most of the residents, businesses, and community resources in the communities RSA are in the urbanized areas of the cities of Merced and Chowchilla. With a population of over 80,000, the city of Merced is the largest population center in the communities RSA and serves as a social and economic focal point for the region. In addition, the Central Valley Wye alternatives pass through the smaller rural-residential community of Fairmead, terminating just north of Madera Acres. The EINUs associated with the Central Valley Wye alternatives also pass through Fairmead and pass through a small rural portion of Waterford. The northern portion of Madera Acres is within the communities RSA. The remainder of the communities RSA consists mostly of rural agricultural land with few concentrations of residences, businesses, or community facilities. The historical dominance of agriculture in the rural economy and the continued agricultural productivity of the

¹⁷ Proposition 13 decreased property taxes in California by assessing property values at their 1975 value and restricted annual increases of assessed value of real property to an inflation factor, not to exceed 2 percent per year. It also prohibited reassessment of a new base year value except for (a) change in ownership or (b) completion of new construction.

¹⁸ The network upgrades would not result in any permanent impacts on tax revenues; therefore, the setting does not include information about Stanislaus or Fresno Counties where the network upgrades are proposed.

region, however, yield a sense of a strong agricultural community throughout the region, even in the sparsely populated rural areas.

Table 3.12-9 identifies the communities within the communities RSA for each of the Central Valley Wye alternatives. The three Central Valley Wye alternatives situated along SR 152 would travel through the southernmost portion of Chowchilla, as well as the community of Fairmead. The Avenue 21 to Road 13 Wye Alternative avoids Chowchilla, but would travel through the southern portion of Fairmead. All of the Central Valley Wye alternatives terminate just north of Madera Acres.

Table 3.12-9 Cities and Communities within the Central Valley Wye Alternatives' Communities Resource Study Areas

Alternative	City/Community
SR 152 (North) to Road 13 Wye	Merced, Chowchilla, Fairmead, and Madera Acres
SR 152 (North) to Road 19 Wye	Waterford, Merced, Chowchilla, Fairmead, and Madera Acres
Avenue 21 to Road 13 Wye	Merced, Fairmead and Madera Acres
SR 152 (North) to Road 11 Wye	Merced, Chowchilla, Fairmead, and Madera Acres

Source: Authority and FRA, 2016c; Merced County Assessor's Office, 2016
SR = State Route

Central Valley Wye Alternatives

SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative is located predominantly in unincorporated Merced, Madera, and Fresno Counties. Land uses along this alternative are primarily agricultural, with scattered single-family residential units and businesses. Communities through which this alternative passes include Merced, Chowchilla, and Fairmead.

Religious facilities, schools, public safety buildings, and parks and recreation resources constitute the majority of the community facilities within the communities RSA. Overall, eight community and public facilities are in the SR 152 (North) to Road 13 Wye Alternative's RSA for communities. These community facilities include Alamo Assembly of God Church, Chowchilla Cemetery, Grace Tabernacle Church, Fairmead Elementary School, Fairmead Head Start, Central California Women's Facility, and two future recreational resources—Ash Slough and Berenda Slough. Figure 3.12-2 shows the locations of community and public facilities within the communities RSA.

City of Merced

The Site 7—Wilson, Wilson Substation and 230 kV Tie-Line are located within southern portions of Merced City limits. The substation is located at North Tower Road and SR 140, and the 230 kV Tie-Line would extend from the substation southwest, terminating at SR 99. Scattered rural residences and agricultural operations are located near Site 7—Wilson, Wilson Substation and 230 kV Tie-Line. There are no community facilities in the communities RSA for the Site 7—Wilson, Wilson Substation and 230 kV Tie-Line.

City of Chowchilla

The SR 152 (North) to Road 13 Wye Alternative is aligned in the east-west direction along the north side of SR 152, which forms the southern limit for Chowchilla. Therefore, the alternative would pass through lands annexed by Chowchilla in 2012, an area of agricultural and light industrial land uses. Few residences and no community facilities are located in this portion of the communities RSA. The majority of Chowchilla's residences and community facilities are located north of this RSA. Community facilities include, but are not limited to, five public schools, a variety of parks and recreational resources, hospitals, places of worship, a county library, public safety facilities, county fairgrounds, and the Chowchilla Municipal Airport. Although the second largest city in Madera County, Chowchilla is largely a rural community, whose economy is closely linked to agricultural production.

Farther east, the alternative would pass less than 0.25 mile from the southern boundary of the Central California Women’s Facility property. The Central California Women’s Facility and the Valley State Prison (approximately 1.2 miles north of this alternative) are within the city limits of Chowchilla, putting both facilities within the communities RSA boundary. Each of these state correctional facilities is situated on one section of land (640 acres) that is used for prison buildings and security facilities (inside the secure perimeter) and agriculture (e.g., almonds) operated for revenue by the California Prison Industry Authority. These prisons are also a major source of employment for the region and employed more than 2,000 individuals in FY 2011/2012 (CDCR 2013a, 2013b).

Community of Fairmead

Southeast of Chowchilla, the SR 152 (North) to Road 13 Wye Alternative crosses the SR 99 corridor and enters the unincorporated rural-residential community of Fairmead. The alternative would extend through Fairmead in an east-west direction and would be aligned north of Avenue 23 and north of the community’s established core. Fairmead is developed to what is typically viewed as rural standards, lacking curb, gutter, sidewalk, and drainage facilities. There are few places for residents to gather. Community facilities within the communities RSA consist of several churches, Fairmead Elementary School and its associated playfields, and Fairmead Head Start. In addition, the Fossil Discovery Center of Madera County, one of the largest middle-Pleistocene fossil excavations in North America, is located in Fairmead but is outside of the communities RSA for this alternative. Although there are limited facilities and no local businesses in Fairmead, there is a sense of community cohesion because of the long-standing family ties many residents have to the farming community. Efforts to revitalize this rural community are ongoing—Madera County planners consider the town to be the county’s top revitalization project, as demonstrated in the Fairmead Neighborhood Mobility and Revitalization Strategy and the draft Fairmead Colony Area Plan 2012. The purpose of these plans is to improve safety and mobility choices for residents of all ages and abilities, encourage and guide new investment in properties and infrastructure within the community, and provide overall visioning for the future of Fairmead. In addition, a citizen-organized group, Fairmead Community & Friends, advocates for local improvements (Howell 2012).

Community of Madera Acres

The SR 152 (North) to Road 13 Wye Alternative continues southeast from Fairmead toward the BNSF corridor and the community of Madera Acres, terminating just north of Madera Acres at Avenue 19. Like Fairmead, Madera Acres is developed to rural standards. However, the community is well established and stable, with significantly higher median household incomes than other communities along the Central Valley Wye alternatives. Community facilities within the communities RSA in Madera Acres include a private school, a county-operated fire station, and an Amtrak station.

SR 152 (North) to Road 19 Wye Alternative

The community setting for the SR 152 (North) to Road 19 Wye Alternative is similar to that described under the SR 152 (North) to Road 13 Wye Alternative, because the two alternatives share a common alignment for much of their extent.

The SR 152 (North) to Road 19 Wye Alternative would require reconductoring of an existing transmission line (Site 7—Le Grand Junction/Sandy Mush Road Warnerville–Wilson 230 kV Transmission Line) which passes through the cities of Waterford and Merced. As a result, the community and public facilities within the SR 152 (North) to Road 19 Wye Alternative’s communities RSA include those identified within the SR 152 (North) to Road 13 Wye Alternative’s communities RSA, plus four additional community and public facilities. Figure 3.12-2 shows the locations of community and public facilities within the communities RSA. The following text describes the community setting for the SR 152 (North) to Road 19 Wye Alternative, as it differs from the SR 152 (North) to Road 13 Wye Alternative in the vicinity of Waterford, Merced, and Chowchilla.

City of Waterford

The SR 152 (North) to Road 19 Wye Alternative, specifically the Site 7—Le Grand Junction/Sandy Mush Road Warnerville–Wilson 230 kV Transmission Line, traverses the eastern portion of Waterford. There are no community or public facilities within the communities RSA in Waterford.

City of Merced

The SR 152 (North) to Road 19 Wye Alternative, specifically the Site 7—Le Grand Junction/Sandy Mush Road Warnerville–Wilson 230 kV Transmission Line, traverses eastern portions of the city of Merced. There are four public and community facilities within the communities RSA in Merced. These include Washington Elementary School, El Capitan High School, Richard Bernasconi Neighborhood Park, and Yosemite Church. Figure 3.12-2 shows the locations of community and public facilities within the communities RSA.

City of Chowchilla

Most of the residences, businesses, and community facilities in Chowchilla are located on the west side of SR 99, approximately 2 miles west of this alternative. However, Greenhill Estates lies on the eastern side of Chowchilla. Greenhill Estates is a single-family residential gated community associated with the Pheasant Run golf course, a recreational vehicle resort, and clubhouse facilities. The SR 152 (North) to Road 19 Wye Alternative runs parallel and approximately 1 mile east of this community for about 2 miles.

Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative is located in unincorporated Merced, Madera, and Fresno Counties, as well as a small portion of the city of Merced.¹⁹ Similar to the other alternatives, land uses along this alternative are primarily agricultural, with scattered single-family residences. The Avenue 21 to Road 13 Wye Alternative, however, is located farther south than the other alternatives. This alternative avoids the residential core of Fairmead and instead passes along the southern boundary of the community of Fairmead census-designated place, as shown on Figure 3.12-2. Overall, six community facilities are within the Avenue 21 to Road 13 Wye Alternative's communities RSA. These community facilities are all located within unincorporated Madera County and include Alview Elementary School, Madera County Fire Station #4, Chowchilla Seventh-Day Adventist Church and School, Fossil Discovery Center of Madera County, and two future recreational resources—Ash Slough and Berenda Slough. The Fossil Discovery Center of Madera County, one of the largest middle-Pleistocene fossil excavations in North America, is located within Fairmead approximately 0.3 mile north of the Avenue 21 to Road 13 Wye Alternative's project footprint. Figure 3.12-2 shows the locations of community and public facilities within the communities RSA.

SR 152 (North) to Road 11 Wye Alternative

The community setting for the SR 152 (North) to Road 11 Wye Alternative is similar to that described under the SR 152 (North) to Road 13 Wye Alternative, because the two alternatives share a common alignment for the majority of their extent. As a result, the community and public facilities with the SR 152 (North) to Road 11 Wye Alternative's communities RSA are the same as those identified within the SR 152 (North) to Road 13 Wye Alternative's communities RSA (shown in Figure 3.12-2). The community setting for the SR 152 (North) to Road 11 Wye Alternative, as it differs from the SR 152 (North) to Road 13 Wye Alternative west of Chowchilla, is described in this section.

Religious facilities, schools, public safety buildings, and parks and recreation resources constitute the majority of the community facilities within the communities RSA. Overall, eight community and public facilities are in the SR 152 (North) to Road 11 Wye Alternative's communities RSA. These community facilities include Alamo Assembly of God Church, Chowchilla Cemetery, Grace Tabernacle Church, Fairmead Elementary School, Fairmead Head Start, Central California Women's Facility, and two future recreational resources—Ash Slough and Berenda Slough. Figure 3.12-2 shows the locations of community and public facilities within the communities RSA.

¹⁹ The portion of the city of Merced that is located within the communities RSA for the Avenue 21 to Road 13 Wye Alternative is the same as described for the SR 152 (North) to Road 13 Wye Alternative.

3.12.6 Environmental Consequences

3.12.6.1 Overview

This section evaluates how the No Project Alternative and the Central Valley Wye alternatives would affect socioeconomics and communities. The impacts of the Central Valley Wye alternatives are described and organized in Section 3.12.6.3, Central Valley Wye Alternatives, as follows:

Construction Impacts

Disruption or Severance of Community Interactions or Division of Established Communities

- Impact SO#1: Temporary Impacts on Communities—Community Cohesion
- Impact SO#2: Permanent Impacts on Communities—Community Cohesion

Displacements and Relocations

- Impact SO#3: Displacements and Relocations of Residences
- Impact SO#4: Displacements and Relocations of Commercial and Industrial Businesses
- Impact SO#5: Displacements and Relocations of Agricultural Operations
- Impact SO#6: Displacements and Relocations of Community and Public Facilities

Children’s Health and Safety

- Impact SO#7: Temporary Impacts on Children’s Health and Safety
- Impact SO#8: Permanent Impacts on Children’s Health and Safety

Economic Impacts

- Impact SO#9: Temporary Impacts on Employment
- Impact SO#10: Permanent Impacts on School District Funding from Student Relocations
- Impact SO#11: Permanent Impacts on School District Funding from Reduced Property Tax Revenues
- Impact SO#12: Permanent Changes in School Bus Transportation
- Impact SO#13: Temporary Impacts on Agricultural Economy—Noise and Vibration
- Impact SO#14: Permanent Impacts on Agricultural Economy
- Impact SO#15: Permanent Impacts on County and City Property Tax Revenues from Property Acquisition
- Impact SO#16: Temporary Impacts on Sales Tax Revenues

Operations Impacts

Disruption or Severance of Community Interactions or Division of Established Communities

- Impact SO#17: Permanent Noise Impacts on Community Cohesion

Children’s Health and Safety

- Impact SO#18: Permanent Impacts on Children’s Health and Safety

Economic Impacts

- Impact SO#19: Permanent Impacts on Regional Employment
- Impact SO#20: Permanent Impacts on Agricultural Economy
- Impact SO#21: Permanent Impacts on County and City Property Tax Revenues from Changes in Property Values
- Impact SO#22: Permanent Impacts on Sales Tax Revenues

3.12.6.2 No Project Alternative

The population in the San Joaquin Valley is expected to grow through 2040 (see Section 2.2.2.2, Planned Land Use). Development in the San Joaquin Valley to accommodate the population increase would continue under the No Project Alternative and result in associated direct and indirect impacts on socioeconomics and communities. Such planned projects that are anticipated to be constructed by 2040 include residential, commercial, industrial, recreational, transportation, and agricultural projects.

Population in the region (Merced and Madera Counties) is expected to increase by 55 percent from 2010 to 2040. Future residential and commercial development is expected to result in a net increase in housing units and to generally contribute to increased urbanization within the region. Transportation projects are expected to enhance mobility and improve emergency response times. Some transportation projects would require acquisition of land and may result in displacement and relocation of residences, businesses, agricultural operations, and community facilities. Transportation projects may also potentially create new barriers that could disrupt community interactions or divide established communities.

Future development projects in Merced and Madera Counties include dairy farm expansions, implementation of airport development and land use plans, and implementation of general and specific plans throughout both counties. Planned projects under the No Project Alternative would also include residential, commercial, and industrial developments, all of which would encourage population, housing, and job growth. A full list of anticipated future development projects is provided in Appendix 3.19-A, Cumulative Plans and Non-Transportation Projects List, and Appendix 3.19-B, Cumulative Transportation Projects Lists. The residential and commercial growth expected in and around Chowchilla, as described in the Introduction and Land Use sections of the *City of Chowchilla 2040 General Plan* (pages I-1 through L-69) (City of Chowchilla 2011), is anticipated to affect some agricultural land and result in the conversion of that land to a nonagricultural use. Madera County Transportation Commission's *Final 2014 Regional Transportation Plan and Sustainable Communities Strategy* identifies transportation projects that would convert approximately 1,876 acres of Important Farmland to transportation uses between 2014 and 2040 (Madera County 2014). The loss of agricultural land could negatively affect employment and tax revenue to the jurisdictions in the region.

Under the No Project Alternative, recent development trends are anticipated to continue, potentially resulting in the disruption or division of communities; displacements and relocations of residences, businesses, community facilities, and agricultural operations; or contributions to changes in the local economy. Population growth and associated development pressures would also result in the removal of agricultural land from productive agricultural use at a rate similar to recent agricultural development trends in Merced and Madera Counties (see Section 3.14.5.2, Important Farmland). Planned development and transportation projects that would occur as part of the No Project Alternative would likely include various forms of mitigation to address the disruption to communities, displacement of residents and businesses, and the loss of tax income to regional jurisdictions.

3.12.6.3 Central Valley Wye Alternatives

Construction and operations of the Central Valley Wye alternatives could result in temporary and permanent impacts on socioeconomics and communities, including the division and disruption of communities; displacement and relocation of residences, businesses, agricultural operations and community facilities; impacts on children's health and safety; and economic impacts, including changes in employment, school district funding, the agricultural economy, and property and sales taxes. In addition, construction and operations of the Central Valley Wye alternatives could result in community benefits, including by improving access for pedestrian and bicycle access, building safer crossings of existing transportation infrastructure, and through employment growth.

Construction Impacts

Construction impacts are those that would result from construction of the Central Valley Wye alternatives, associated infrastructure, and related physical changes. Construction activities for the Central Valley Wye alternatives would occur over a 1 to 3-year period at any given location and would involve, for example, demolition of existing structures; clearing and grubbing; handling, storing, hauling, excavating, and placing fill; construction of aerial structures, bridges, road modifications, utility upgrades and relocations, HSR electrical systems, and railbeds. Construction activities are further described in Chapter 2, Alternatives.

Disruption or Severance of Community Interactions or Division of Established Communities

Within the communities RSA, existing transportation features such as major roads and rail lines help shape the boundaries of the communities and can provide access between residents and their surroundings. However, these transportation features can also serve as barriers to interactions between geographical neighbors. For example, SR 99 is presently a major transportation corridor within the communities RSA, but it is an access-controlled state highway with distances of up to 2 miles between interchanges. Running parallel to SR 99 are the Union Pacific Railroad (UPRR) and Southern Pacific Railroad rail lines, which allow controlled crossing at designated points. SR 152 is a major transportation facility within the region, providing access to many areas, but is also a multilane roadway that can be difficult to cross. Therefore, existing linear transportation features provide access to the region and connections within the larger agricultural community, but they also divide adjacent portions of the area and may require driving between neighbors that may be geographically near.

To the extent that the Central Valley Wye alternatives generally track existing transportation corridors, the introduction of a new large linear construction site associated with the Central Valley Wye alternatives may not create new barriers to interactions between geographical neighbors. However, in those specific locations where the Central Valley Wye alternatives depart from existing transportation corridors, construction of the Central Valley Wye alternatives would result in the introduction of a large linear construction site between different areas that would be largely impassable and would require residents and community members to take detours to reach previously accessible areas. This construction would also have localized impacts on air quality, noise and vibration, and aesthetics and visual resources, which in turn could have implications on community cohesion and social engagement. The disruption of circulation patterns, the increase in construction emissions and noise and vibration, and the visual degradation associated with construction could affect community cohesion and the residents' perceived quality of life. The construction activities would introduce a visible and functional barrier that could potentially deter neighbors from interacting, participating in community activities, and supporting each other, and could result in a perception by area residents that they have been separated from their community.

The acquisition of farmland and displacement of farm residences in a region that takes pride in its agricultural heritage and where agriculture is a dominant economic activity could cause disruption not only to the individual property owners but also to the wider agricultural community. Rural neighbors often rely on each other for assistance (e.g., for responding to an emergency; lending resources in the event of unexpected equipment failure; assisting during harvest). This interdependence can build community cohesion, even in areas with low population density, and especially where the same families may have been neighbors for many years. Displacement of rural homes also can cause disruption to families faced with having to move or replace their established homes, along with outbuildings, gardens, irrigation and fencing systems, mature landscaping, and other improvements that have been built over decades or even generations. The broader farming community can also suffer disruption from the displacement of multiple neighbors—who may or may not decide to continue farming in proximity to a new HSR line—and through having farming operations in the area divided or altered by a new linear feature.

Impact SO#1: Temporary Impacts on Communities—Community Cohesion

Construction of the Central Valley Wye alternatives would result in temporary, localized impacts on transportation, noise and vibration, and visual resources, which could in turn affect community cohesion and social engagement in residential communities and the rural agricultural communities adjacent to the Central Valley Wye alternatives.

Transportation

Construction of the Central Valley Wye alternatives would require temporary road closures or modifications, resulting in the diversion of traffic from closed roads. In addition to automobile traffic, these closures could disrupt pedestrian, bicycle, and transit circulation patterns in the communities along the Central Valley Wye alternatives and could inconvenience residents and businesses. Temporary road closures could result in a physical disruption to communities and community interactions where access to some neighborhoods, businesses, or community facilities could temporarily be obstructed, especially for those with ingress and egress on roadway segments that are under construction. Access would continue to be provided for all residences and businesses and emergency vehicle access for police and fire protection services would also be maintained at all times.

As described in Section 3.2, the Central Valley Wye alternatives would require from 13 to 17 temporary road closures—the most would occur under the SR 152 (North) to Road 13 Wye Alternative and the fewest would occur under the SR 152 (North) to Road 19 Wye and SR 152 (North) to Road 11 Wye Alternatives. Community disruption caused by these temporary road closures would be associated with the length of alignment constructed within established communities for each Central Valley Wye alternative. The SR 152 (North) to Road 19 Wye Alternative would require construction of the greatest length of alignment through Fairmead as two wye legs would be constructed through the community, resulting in the most disruption of community interactions. The SR 152 (North) to Road 13 Wye Alternative and SR 152 (North) to Road 11 Wye Alternative would each require the construction of one wye leg through Fairmead, resulting in less disruption than the SR 152 (North) to Road 19 Wye Alternative. The Avenue 21 to Road 13 Wye Alternative, which is aligned along the southern edge of Fairmead in a predominantly rural area, would have the least disruption to the community cohesion of Fairmead caused by temporary road closures.

The Authority would incorporate a construction management plan (CMP) prior to construction that would include actions pertaining to traffic control and access; this would help address transportation-related impacts on communities (SO-IAMF#1). This CMP would use signs to instruct customers and vendors about access to businesses during construction and would verify that proper access is maintained for local businesses, residences, and emergency services. In addition, the CMP would include consultation with local transit providers to minimize impacts on local and regional bus routes in affected communities.

As presented in Section 3.2, the Central Valley Wye alternatives would incorporate the following IAMFs that would avoid or minimize temporary transportation impacts by reducing conflicts between vehicles and construction-related traffic, maintaining access, and minimizing delays resulting from construction:

- TR-IAMF#1, Protection of Public Roadways during Construction
- TR-IAMF#2, Construction Transportation Plan
- TR-IAMF#3, Off-Street Parking for Construction-Related Vehicles
- TR-IAMF#4, Maintenance of Pedestrian Access
- TR-IAMF#5, Maintenance of Bicycle Access
- TR-IAMF#6, Restriction on Construction Hours
- TR-IAMF#7, Construction Truck Routes
- TR-IAMF#8, Construction during Special Events
- TR-IAMF#9, Protection of Freight and Passenger Rail during Construction

Although these IAMFs would greatly reduce the inconveniences related to transportation, and residents would continue to have access to the larger community area, all of the Central Valley Wye alternatives would result in the closure of multiple roadways during the construction period and would require community members in many areas to take long detours to reach areas that were previously more directly accessible. For some residents, their nearest businesses and neighbors may change as a result of these detours. This could alter the sense of belonging to a place for some residents and limit social and business interactions. These impacts are anticipated to be greatest under the SR 152 (North) to Road 19 Wye Alternative and least for the Avenue 21 to Road 13 Wye Alternative.

Noise

Day and nighttime construction activities could increase ambient noise levels in exceedance of the FRA's construction noise guidelines to cause human annoyance and affect residents' quality of life. These impacts would be temporary and intermittent. Construction generally would be limited to the hours between 7:00 a.m. and 7:00 p.m., to avoid noise impacts during nighttime periods when residents are most sensitive to noise. Likely exceptions to this could include construction over a freeway or an active heavy rail line, where nighttime construction may be conducted to limit impacts on freight and highway traffic; and construction and reconductoring associated with network upgrades, which may require the use of helicopters to access work areas. Construction noise has the potential to disrupt residents, businesses, or community facilities close to construction sites.

As discussed in Section 3.4 under Impact NV#1, Temporary Exposure of Sensitive Receptors to Construction Noise, temporary elevated noise would affect nearby residents during construction. Construction of the Central Valley Wye alternatives and network upgrades would temporarily affect 57 to 106 sensitive receptors during daytime construction and 80 to 314 sensitive receptors because of nighttime construction. For both daytime and nighttime impacts, the SR 152 (North) to Road 19 Wye Alternative would result in many more impacts at sensitive receptors than the other alternatives, because of alignment construction through Fairmead and network upgrades and reconductoring in Waterford and Merced, which result in a greater number of sensitive receptors in close proximity to construction activities. For daytime impacts, the SR 152 (North) to Road 11 Wye Alternative would have the fewest impacts and the Avenue 21 to Road 13 Wye Alternative would have the fewest nighttime construction impacts, as these alternatives are more distant from sensitive receptors that would remain throughout construction. Construction noise would temporarily affect residents within the rural agricultural community along the entire length of the alignments and network upgrades, but the greatest disruption would occur in Fairmead under the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye alternatives, and in Waterford and Merced under the SR 152 (North) to Road 19 Wye Alternative, where the greatest concentration of sensitive receptors occur near the project footprint for these alternatives. The Avenue 21 to Road 13 Wye Alternative would generally avoid noise nuisance impacts in Fairmead.

The Authority would incorporate a CMP prior to construction that would include actions pertaining to noise controls to minimize impacts on communities (SO-IAMF#1). In addition, as discussed in Section 3.4, the contractor would incorporate FRA guidelines for minimizing noise and vibration impacts at sensitive receptors (NV-IAMF#1). These impacts would be further reduced through implementation of a mitigation measure discussed in Section 3.4 (specifically NV-MM#1: Construction Noise Mitigation, which requires the contractor to conduct construction noise monitoring and provides them with the flexibility to implement different tools to meet FRA guidelines). With implementation of this mitigation measure, it is not anticipated that temporary and periodic construction noise levels would exceed FRA guidelines.

Visual Quality

During the construction period, approximately 1 to 3 years in duration, construction equipment storage, earthmoving, construction of structures, and concrete plant operations would degrade the visual aesthetics for adjacent viewers. Construction equipment and activities along the Central Valley Wye alternative alignments could generate dust and material stockpiles that could create an untidy appearance, collectively degrading the visual unity and intactness of the

surroundings. Residential viewers would be affected where construction occurs within 0.25 mile of their viewpoint. The SR 152 (North) to Road 13 Wye Alternative would affect the most residential views, as it would cross a cluster of residences along Robertson Boulevard twice north of SR 152 and extend through Fairmead. The SR 152 (North) to Road 19 Wye and SR 152 (North) to Road 11 Wye alternatives would affect concentrations of residences along Robertson Boulevard and in Fairmead. The Avenue 21 to Road 13 Wye Alternative would affect the fewest residential views.

Construction would introduce features, such as large construction equipment, material stockpiles, and nighttime lighting that would contrast with the established rural character of the area and alter the existing visual character of residential views. These temporary changes in visual quality could affect residents' quality of life and affect their perception of the community character. Furthermore, construction could introduce a visual barrier that could result in a perception by area residents that they have been separated from their community; for example, visible construction areas near community features such as playgrounds and churches could result in the disruption or severance of community interactions. As discussed in Section 3.16, where temporary construction activities could affect the existing visual quality, the Authority would incorporate a CMP prior to construction that includes actions pertaining to visual protection to minimize impacts on communities (SO-IAMF#1).

CEQA Conclusion

The impact under CEQA would be less than significant for the Central Valley Wye alternatives because, while temporary, localized temporary road closures, increases in noise, and visual quality degradation would disrupt established communities and community interactions, cause human annoyance, and affect the quality of life of community residents. These impacts would be temporary and would not result in the physical division of an existing community. Therefore, CEQA does not require any mitigation.

Impact SO#2: Permanent Impacts on Communities—Community Cohesion

Construction of the Central Valley Wye alternatives would introduce permanent infrastructure and associated physical changes that would result in impacts on community cohesion in residential communities and the rural agricultural communities adjacent to the Central Valley Wye alternatives. Community cohesion could be permanently affected by the physical division of communities, residential and business displacements, permanent road closures, and the degradation of visual quality. The following discussion describes the communities that would be affected under each of the Central Valley Wye alternatives, addressing communities from west to east.

SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would begin in Merced County at the intersection of Henry Miller Road and Carlucci Road and extend east through agricultural lands into Madera County, toward Chowchilla. This alternative would curve around Chowchilla, bypassing its downtown and population center. The San Jose to Merced leg of the alternative would curve north approximately 1 mile west of Chowchilla—far enough away that community impacts would be minimal, although the elevated guideway that would span Ash Slough and the Chowchilla River would be visible from the community. The San Jose to Fresno leg would continue east along the north side of SR 152, Chowchilla's southern city limit, and travel through agricultural lands in the southern portion of the city for approximately 2 miles. Construction of this alternative would require the removal of some trees within the Robertson Boulevard Tree Row, a historic architectural and scenic resource that extends southwest from downtown Chowchilla along SR 233. This historic tree row is often perceived as the gateway to Chowchilla and its degradation could affect residents' sense of place. However, Chowchilla would not be divided by the SR 152 (North) to Road 13 Wye Alternative, and impacts on community cohesion would be limited. No displacements of residences or businesses would occur in Chowchilla.

East of Chowchilla, the SR 152 (North) to Road 13 Wye Alternative would cross the UPRR/SR 99 corridor on an aerial structure, and continue on an embankment structure through the community of Fairmead north of Avenue 23. The alternative would travel through Fairmead in a new right-of-way, introducing a new linear feature that would physically divide the community in the east-west

direction, and blocking residential views that include distant views to the Sierra Nevada range. The residential northern part of the community (comprising approximately 100 housing units, or 20 percent of the Fairmead's total housing units) would be separated from the residents and community facilities (such as churches, Fairmead Elementary School, and Fairmead Head Start) south of Avenue 23, dividing and disrupting the cohesiveness of the community. Although grade-separated crossings of the HSR would provide north-south access on the west and east side of the community at Fairmead Boulevard, Road 18 3/4, and Road 20, access between the northern and southern portions of Fairmead would be permanently reduced because of road closures at Road 19 1/2 and Road 20 1/2. These road closures would disrupt and alter the access of some residents to community facilities such as Fairmead Elementary School and playfields and Fairmead Head Start childcare center. In addition, construction of this alternative would require the acquisition and displacement of 18 single-family residences within northern Fairmead. Although the displacements would affect a relatively small number of Fairmead housing units (approximately 3.5 percent), the removal of these homes and displacement of residents who may have had long-standing ties within the community would disrupt established patterns of interaction among community residents and affect community cohesion. As described under the discussion of Displacements and Relocations, the Authority would comply with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (SO-IAMF#2) and develop a relocation mitigation plan (SO-IAMF#3), thereby reducing potential impacts on community cohesion by providing relocation assistance for people displaced through right-of-way acquisition and developing a tailored relocation mitigation plan specific to the needs of the affected communities.

The alternative would travel south from the community of Fairmead toward the north end of Madera Acres near Avenue 19, at which point it would be adjacent to the BNSF corridor. The southern limit of this alternative is Avenue 19, which is the northern boundary of Madera Acres. As such, this alternative would not physically divide Madera Acres, change access or visual quality within the community, nor result in displacements of Madera Acres residences.

An associated electrical interconnection feature (Site 7—Wilson, Wilson Substation and a small portion of the 230 kV Tie-Line) would be located within the southern portion of the city of Merced. However, the reconfiguration of the Wilson Substation would occur within the fence line of the existing substation and the 230 kV Tie-Line would not affect access or community character in the area. No displacements of residences or businesses would occur in Merced.

In addition to the impacts on established residential communities, construction of each of the Central Valley Wye alternatives, including the SR 152 (North) to Road 13 Wye Alternative, would affect the rural agricultural community in one of the most productive agricultural regions of the United States. Under this alternative, the acquisition of land for construction would displace 78 residences in unincorporated rural areas—9 in Merced County and 69 in Madera County. The Authority would incorporate the same measures to minimize impacts on residences and businesses (SO-IAMF#2 and SO-IAMF#3) within the rural agricultural community as applied to residential communities. In addition, the Authority would incorporate measures to minimize impacts on agricultural operations and the amount of land affected by HSR construction and operation (AG-IAMF#2 and AG-IAMF#3). With incorporation of these measures, community cohesion in the rural agricultural community would be minimized.

SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative would extend east through agricultural lands from the intersection of Henry Miller Road and Carlucci Road toward Chowchilla. An associated network upgrade (i.e., Site 7—Le Grand Junction/Sandy Mush Road, Warnerville—Wilson 230 kV Transmission Line) passes through eastern portions of the cities of Merced and Waterford. Similar to the SR 152 (North) to Road 13 Wye Alternative, the San Jose to Merced leg of this alternative would pass through the southern portion of Chowchilla for approximately 2 miles adjacent to the north side of SR 152. The San Jose to Merced leg of the alternative would curve northward as it approaches SR 99 and continue north adjacent to Road 19, approximately 1 mile east of Chowchilla, for approximately 2 miles before curving west toward and across SR 99. Construction of this alternative would require the removal of some of the trees in the Robertson

Boulevard Tree Row, which could diminish the visual character of this gateway to Chowchilla. As with the SR 152 (North) to Road 13 Wye Alternative, this alternative would terminate at the north end of Madera Acres near Avenue 19 at which point it would be adjacent to the BNSF corridor. This alternative would not displace any residences in the Madera Acres community and would not result in a new physical division of this community. The SR 152 (North) to Road 19 Wye Alternative would also not divide Waterford, Chowchilla, or Merced; construction impacts on community cohesion would be limited because there are few residences in the vicinity of the Central Valley Wye alternatives alignment in Chowchilla and transmission line alignment in Waterford and Merced. Moreover, network upgrades only result in minor physical changes from the baseline (i.e., increase the height of existing structures by 11 to 32 percent). No displacements of residences or businesses would occur in Waterford, Chowchilla, or Merced.

Of the Central Valley Wye alternatives, the SR 152 (North) to Road 19 Wye Alternative would have the greatest impact on community cohesion and the division of the existing community of Fairmead. East of SR 99, two legs of this alternative would travel through Fairmead and create a new transportation right-of-way. The San Jose to Fresno leg of the SR 152 (North) to Road 19 Wye Alternative would descend from aerial to embankment as it continues east through Fairmead north of Avenue 23, while the San Jose to Merced leg of the alternative would curve north through the northern portion of Fairmead on embankment and aerial structure. These legs of the alternative would divide Fairmead in an east-west and southwest-northeast direction and introduce permanent changes to the visual quality of existing residential views in Fairmead that would contrast with the rural and agricultural setting and would block residential views. Although north-south access on the west and east side of the community would be maintained at Fairmead Boulevard, Road 18 3/4, and Road 20, access within the community and to community facilities would be reduced and local circulation disrupted because of the permanent closure of Road 19 1/2 and Road 20 1/2. The SR 152 (North) to Road 19 Wye Alternative would displace the most Fairmead residences of any of the Central Valley Wye alternatives (53 residents, accounting for 10.5 percent of the community's residences). The removal of these homes and displacement of residents who may have had long-standing ties within the community would disrupt established patterns of interaction among community residents and affect community cohesion, particularly because many of these residents may be unable to relocate within the same community, as described in more detail under the discussion of Displacements and Relocations. The Authority would incorporate IAMFs (SO-IAMF#1 and SO-IAMF#2) to reduce potential impacts on community cohesion by providing relocation assistance for people displaced through right-of-way acquisition and developing a tailored relocation mitigation plan specific to the needs of the affected communities.

In addition to the impacts on established residential communities, construction of the SR 152 (North) to Road 19 Wye Alternative could have permanent impacts on the rural agricultural community. This alternative would result in the acquisition and displacement of 68 rural residences and farmsteads in unincorporated rural areas—10 in Merced County and 56 in Madera County. The Authority would incorporate IAMFs to minimize impacts on rural residences (SO-IAMF#2 and SO-IAMF#3) and to minimize impacts on agricultural operations and the amount of land affected by HSR construction and operation (AG-IAMF#2 and AG-IAMF#3). With incorporation of these measures, community cohesion in the rural agricultural community would be minimized.

Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative would be aligned along the existing Henry Miller Road and Avenue 21 rights-of-way in the east-west direction and the Road 13, UPRR/SR 99, and BNSF rights-of-way in the north-south direction. Of the four Central Valley Wye alternatives, the Avenue 21 to Road 13 Wye Alternative would have the least impact on established communities. This alternative would curve approximately 1 mile west and 2 miles south of Chowchilla. Construction of this alternative would require the removal of some of the trees in the Robertson Boulevard Tree Row, which could diminish the visual character of this gateway to Chowchilla. As this tree row is often perceived as the gateway to Chowchilla, this has the potential to affect Chowchilla residents' sense of place. The Avenue 21 to Road 13 Wye Alternative would continue

east through the southernmost portion of Fairmead, avoiding its residential core. The alternative would not result in the physical division of Fairmead nor affect the aesthetics and visual quality of the community. One permanent road closure (Road 19 1/2) would occur within southern Fairmead, and while it would affect some rural residents, it would have a lesser effect on local circulation and access to community facilities than the SR 152 alternatives. Because of the alignment of the Avenue 21 to Road 13 Wye Alternative along the southern boundary of Fairmead, there would be a limited number of residential displacements (four displaced Fairmead residences, accounting for less than 1 percent of Fairmead residences) along Avenue 21.

As with the SR 152 (North) to Road 13 Wye Alternative, this alternative would terminate at the north end of Madera Acres near Avenue 19, at which point it would be adjacent to the BNSF corridor. This alternative would not displace any residences in the Madera Acres community and would not result in a new physical division of this community.

The same electrical interconnection features described for the SR 152 (North) to Road 13 Wye Alternative would be constructed/reconfigured in the city of Merced. No residences or businesses would be displaced in the city of Merced.

Construction of the Avenue 21 to Road 13 Wye Alternative would have permanent impacts on the rural agricultural community, requiring the acquisition and displacement of 60 rural residences and farm residences in unincorporated rural areas—6 in Merced County and 55 in Madera County. As described previously, the Authority would incorporate IAMFs to minimize impacts on rural residences (SO-IAMF#2 and SO-IAMF#3) and to minimize impacts on agricultural operations and the amount of land affected by HSR construction and operation (AG-IAMF#2 and AG-IAMF#3). With incorporation of these measures, community cohesion in the rural agricultural community would be minimized.

SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would begin in Merced County at the intersection of Henry Miller Road and Carlucci Road and extend east through agricultural lands into Madera County toward Chowchilla. This alternative would curve around Chowchilla, bypassing its downtown and major population center. The San Jose to Merced leg of the alternative would curve north approximately 3 miles west of Chowchilla—far enough away that community impacts would be minimal, although the elevated guideway that would span Ash Slough and the Chowchilla River would be visible from the community. The San Jose to Fresno leg would continue east along the north side of SR 152, Chowchilla's southern city limit, and travel through agricultural lands in the southern portion of the city for approximately 2 miles. Construction of this alternative would require the removal of some trees within the historic Robertson Boulevard Tree Row. As this tree row is often perceived as the gateway to Chowchilla, this has the potential to affect Chowchilla residents' sense of place. However, Chowchilla would not be divided by the SR 152 (North) to Road 11 Wye Alternative and construction impacts on community cohesion would be limited because there are few residences in the vicinity of the alternative. No displacements of residences or businesses would occur in Chowchilla.

The SR 152 (North) to Road 11 Wye Alternative would continue east from Chowchilla, cross the UPRR/SR 99 corridor on aerial structure, and descend to embankment as it continues through the community of Fairmead north of Avenue 23. The alternative would travel through the community of Fairmead in a new right-of-way, introducing a new linear feature that divides the community in the east-west direction, and blocking residential views that include distant views to the Sierra Nevada range. Impacts on community cohesion to Fairmead under this alternative would be similar to those described for the SR 152 (North) to Road 13 Wye Alternative because both alternatives would result in similar physical divisions, the same permanent changes to local roadway circulation, and a similar number of residential displacements. The SR 152 (North) to Road 11 Wye Alternative would displace 15 Fairmead residences (approximately 3 percent of all Fairmead residences). The Authority would incorporate IAMFs (SO-IAMF#1 and SO-IAMF#2) to reduce potential impacts on community cohesion by providing relocation assistance for people displaced through right-of-way acquisition and developing a tailored relocation mitigation plan specific to the needs of the affected communities.

As with the SR 152 (North) to Road 13 Wye Alternative, this alternative would terminate at the north end of Madera Acres near Avenue 19 at which point it would be adjacent to the BNSF corridor. This alternative would not displace any residences in the Madera Acres community and would not result in a new physical division of this community.

The same electrical interconnection features described for the SR 152 (North) to Road 13 Wye Alternative would be constructed/reconfigured in the city of Merced. No displacements of businesses or residences would occur in the city of Merced.

In addition to the impacts on established residential communities, construction of the SR 152 (North) to Road 11 Wye Alternative would affect the rural agricultural community in one of the most productive agricultural regions of the United States. Under this alternative, the acquisition of land for construction would displace 47 residences in unincorporated rural areas— 9 in Merced County and 38 in Madera County. Although some of these displacements would occur just outside of communities, the majority of these displacements would occur within agricultural and rural areas. The Authority would incorporate IAMFs to minimize impacts on rural residences (SO-IAMF#2 and SO-IAMF#3) and to minimize impacts on agricultural operations and the amount of land affected by HSR construction and operation (AG-IAMF#2 and AG-IAMF#3). With incorporation of these measures, community cohesion in the rural agricultural community would be minimized.

CEQA Conclusion

The impact under CEQA would be significant for the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives because there would be a physical division of an existing community, Fairmead, even with the incorporation of IAMFs that minimize permanent community cohesion impacts and provide relocation assistance. As part of mitigation measure SO-MM#1: Implement Measures to Reduce Impacts Associated with the Division of Residential Neighborhoods, the Authority would conduct outreach to affected residents within Fairmead to determine their specific relocation needs and assist displaced residents with finding new suitable housing within the communities they currently reside in. As part of SO-MM#2: Implement Measures to Reduce Impacts Associated with the Division of Communities, the Authority conducted extensive coordination with the Fairmead Community and Friends stakeholder group, the Chowchilla School District, and the County of Madera to identify specific features that would be incorporated into the final design of the Preferred Alternative to maintain a robust sense of community cohesion in Fairmead. These measures would enhance local roadway connectivity within the community through the provision of roadway improvements and a multi-use trail that would ensure access is maintained within the community, improve pedestrian and bicycle safety, and revitalize the community aesthetically through landscaping and streetscaping. However, because implementation of SO-MM#1 and SO-MM#2 would not avoid the impacts caused by community division, the impact under CEQA would remain significant.

Displacements and Relocations

Construction of the Central Valley Wye alternatives would require additional right-of-way acquisition in some locations, resulting in displacements and the need for relocation of residential, business, agricultural, and community/public facilities. The lengths of the Central Valley Wye alternatives vary from 51 to 55 miles and cross predominantly rural lands. To comply with the objective of the Authority to use existing transportation corridors when feasible, the Central Valley Wye alternatives primarily are sited adjacent to existing transportation corridors. In some locations, engineering constraints and avoidance of environmental impacts or communities require deviation from these corridors. In these cases, particularly in and near residential clusters, the Authority would need to acquire additional property that would result in the acquisition of parcels (and in some cases, associated structures) to construct the Central Valley Wye alternatives. This section summarizes the residential, business, agricultural, and community/public facility displacements as a result of the construction of the Central Valley Wye alternatives and presents the relocation capacity within the relocation RSAs. The Draft Relocation Impact Report (Authority and FRA 2016b) provides complete information on displacements and relocation.

Impact SO#3: Displacements and Relocations of Residences

Table 3.12-10 presents the estimated number of displaced residential units by geographic location for each Central Valley Wye alternative. The approximate total residential units and residents displaced would be 96 units and 315 residents under the SR 152 (North) to Road 13 Wye Alternative, 119 units and 391 residents under the SR 152 (North) to Road 19 Wye Alternative, 65 units and 213 residents under the Avenue 21 to Road 13 Wye Alternative, and 62 units and 224 residents under the SR 152 (North) to Road 11 Wye Alternative. These displaced units consist of single-family residences (approximately 80 percent of displacements) and scattered mobile/manufactured homes (approximately 20 percent of displacements) (ARWS 2015). Under each of the Central Valley Wye alternatives, displacements would occur in the unincorporated areas of Merced and Madera Counties and the community of Fairmead. Displacements would not occur in the community of Madera Acres. The majority of displaced residential units would occur in unincorporated Madera County, while the greatest variation in the number of displacements would occur in Fairmead. Approximately 6 percent of total residential displacements would occur in Fairmead under the Avenue 21 to Road 13 Wye Alternative, which traverses the community's southern boundary, compared to 44 percent of residential displacements under the SR 152 (North) to Road 19 Wye Alternative. As described under Impact SO#2, the Avenue 21 to Road 13 Wye Alternative would displace less than 1 percent of Fairmead residences, while the SR 152 (North) to Road 19 Wye Alternative would displace 10.5 percent of Fairmead residences.

Table 3.12-10 Estimated Number of Residential Displacements by Alternative

Alternative/Geographic Area	Residential Units Displaced	Estimated Number of Residents to be Relocated ¹
SR 152 (North) to Road 13 Wye		
Unincorporated Merced County	9	30
Unincorporated Madera County	69	226
Community of Fairmead	18	59
Total	96	315
SR 152 (North) to Road 19 Wye		
Unincorporated Merced County	10	33
Unincorporated Madera County	56	184
Community of Fairmead	53	174
Total	119	391
Avenue 21 to Road 13 Wye		
Unincorporated Merced County	6	20
Unincorporated Madera County	55	180
Community of Fairmead	4	13
Total	65	213
SR 152 (North) to Road 11 Wye		
Unincorporated Merced County	9	30
Unincorporated Madera County ²	38	158
Community of Fairmead	15	36
Total	62	224

Source: ARWS, 2015, 2016

¹ The numbers of displaced persons values are based on estimated averages of 3.32 people per residential unit for Merced County and 3.28 people per residential unit for Madera County.

² Data for "Unincorporated Madera County does not include data for the Community of Fairmead.

The numbers of displaced units and persons are approximate.

SR = State Route

Some of the displaced residences are on parcels that are part of the project footprints of the Central Valley Wye alternatives but not within the final right-of-way. It is possible that these residential structures may not be removed, and that some of these relocations may be temporary during construction. These determinations and negotiations would be made later on a parcel-by-parcel basis during the right-of-way acquisition process. For the purposes of this analysis to capture the full potential impact, it is assumed that all displaced residences would be relocated to new homes.

Table 3.12-11 shows the results of a preliminary analysis of the gap between residences displaced and replacement residences available to displaced residents (gap analysis) by alternative. Analysts identified 186 available residential units for rent or for sale within the relocation RSA. Of these available residences, 164 were single-family residences for sale, 12 were mobile/manufactured homes, and 10 were single-family or multifamily rental units (ARWS 2015). Additionally, 30 vacant lots zoned for residential or rural-residential uses were identified that could be developed to accommodate displaced residents. An analysis of available replacement properties indicates that there would likely be a sufficient number of comparable replacement properties available in the relocation RSA as a whole. However, there would be insufficient residential properties within the community of Fairmead and unincorporated Madera County to accommodate all the residents displaced under the SR 152 alternatives within the same community. The gap between the displaced residences and the available relocation properties in Fairmead would be greatest under the SR 152 (North) to Road 19 Wye Alternative, which would displace 53 Fairmead residences, resulting in a shortfall of 41 relocation properties. In contrast, under the Avenue 21 to Road 13 Wye Alternative, the four displaced Fairmead residences would likely be able to relocate within the same community. All Central Valley Wye alternatives would result in more displacements in unincorporated Madera County than there are available relocation properties, although this shortfall would be greatest under the SR 152 (North) to Road 13 Wye Alternative (40 residences). Displaced residents in Fairmead under the SR 152 alternatives and in Madera County under all Central Valley Wye alternatives could relocate to nearby the cities of Chowchilla or Madera, or unincorporated Merced County, which provide more housing options. As there are sufficient residential replacement properties in the region as a whole, no construction of replacement housing would be anticipated at this time.

Under the Uniform Relocation Assistance and Real Property Acquisition Policies Act, comparable replacement housing should provide space and physical characteristics similar to those of the displacement dwelling. Therefore, it is important that the values of potential replacement housing units are comparable to the values of the displaced properties. While the exact property values of the displaced properties are not available, the cost of potential replacement housing within Chowchilla, Fairmead, and Madera Acres is comparable to housing in these communities as a whole. Property values within the rural portions of the relocation RSA vary greatly depending on the size of the parcel, the number of houses on the property, the quality of the land for agricultural production, and improvements (e.g., wells). Residents in these locations may need to relocate to other rural communities within the relocation RSA in order to obtain comparable replacement housing.

Table 3.12-11 Gap Analysis of Residential Developments by Alternative

Alternative/Geographic Area	Residential Units Displaced	Residential Units Available	Size of Surplus
SR 152 (North) to Road 13 Wye			
Unincorporated Merced County	9	41	+32
Unincorporated Madera County	69	29	-40
City of Chowchilla	0	71	+71
Community of Fairmead	18	12	-6

Alternative/Geographic Area	Residential Units Displaced	Residential Units Available	Size of Surplus
Community of Madera Acres	0	33	+33
Total	96	186	+90
SR 152 (North) to Road 19 Wye			
Unincorporated Merced County	10	41	+31
Unincorporated Madera County	56	29	-27
City of Chowchilla	0	71	+71
Community of Fairmead	53	12	-41
Community of Madera Acres	0	33	+33
Total	119	186	+67
Avenue 21 to Road 13 Wye			
Unincorporated Merced County	6	41	+35
Unincorporated Madera County	55	29	-26
City of Chowchilla	0	71	+71
Community of Fairmead	4	12	+8
Community of Madera Acres	0	33	+33
Total	65	186	+121
SR 152 (North) to Road 11 Wye			
Unincorporated Merced County	9	41	+32
Unincorporated Madera County	38	29	-9
City of Chowchilla	0	71	+71
Community of Fairmead	15	12	-3
Community of Madera Acres	0	33	+33
Total	62	186	+124

Source: Zillow, 2015; Redfin, 2015
 SR = State Route

Based on known demographics of the region, residential displacements associated with the Central Valley Wye alternatives could result in the relocation of sensitive populations, including the elderly (over 65), disabled, female heads of household, and linguistically isolated residents. While the demographics of the displaced populations is not known for each alternative, a review of demographic data for communities indicates that sensitive populations are distributed relatively evenly throughout the displacement RSA, with the exception of the unemployed population in Fairmead, which is higher than the surrounding areas. As such, it is anticipated that the displacement of sensitive populations would be correlated with the total number of displacements under each Central Valley Wye alternative. The SR 152 (North) to Road 19 Wye Alternative, which has the most residential displacements, would likely displace the most sensitive populations, while the SR 152 (North) to Road 11 Wye Alternative, which has the fewest residential displacements, would displace the fewest sensitive populations. These displacements would require that adequate relocation plans be put in place to meet any special needs. Potential impacts from the relocation of sensitive populations would be a direct result of constructing the Central Valley Wye alternatives and the need to acquire land for the Central Valley Wye alternatives and their associated structures. The Authority's Title VI Program

includes a commitment to include public involvement of all persons affected by the HSR (Authority 2012a). The Authority is committed to ensuring that no person in the state of California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and Related Statutes. The anticipated residential displacements resulting from construction of the Central Valley Wye alternatives are not expected to disproportionately relocate sensitive populations.

Displaced residents would be relocated to replacement housing in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (SO-IAMF#2), which provides benefits to displaced individuals to assist them financially and with advisory services related to relocating their residence or business. The Uniform Relocation Assistance and Real Property Acquisition Policies Act requires that the owning agency provide notification to all affected property owners of the agency's intent to acquire an interest in their property. This notification includes a written offer letter of just compensation. A right-of-way specialist is assigned to each property owner to assist him or her through the acquisition process. The Uniform Relocation Assistance and Real Property Acquisition Policies Act also provides benefits to displaced individuals to assist them financially and with advisory services related to relocating their residence or business operation. Benefits are available to both owner occupants and tenants of either residential or business properties. Before any acquisitions occur, the Authority would develop a relocation mitigation plan (SO-IAMF#3) in consultation with affected cities and counties, tailored to the specific needs of the affected communities. In addition to establishing a program to minimize the economic disruption related to relocation, the relocation mitigation plan would be written in a style that also enables it to be used as a public-information document. Appendix 3.12-B provides informational documents to help property owners understand the property acquisition process consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

CEQA Conclusion

The impact under CEQA would be less than significant. Construction of the Central Valley Wye alternatives would result in the displacement of residential properties; however, it would not result in the displacement of a substantial number of existing housing units, necessitating the construction of replacement housing because there are sufficient residential replacement properties in the relocation RSA to accommodate displaced residences. The Central Valley Wye alternatives would incorporate measures (SO-IAMF#2 and SO-IAMF#3) to provide assistance to those affected by relocation. Therefore, CEQA does not require any mitigation.

Impact SO#4: Displacements and Relocations of Commercial and Industrial Businesses

The Central Valley Wye alternatives would displace from one to eight commercial and industrial businesses, depending on the alternative (Table 3.12-12). The most business displacements would occur under the SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 19 Wye Alternatives (eight business displacements each), while the Avenue 21 to Road 13 Wye Alternative would displace only one business. Under the SR 152 alternatives, business displacements would be located along SR 152 and include two warehouses, three storage yards, three markets, and a gas station. From 12 to 23 mobile/manufactured homes would be displaced by the Central Valley Wye alternatives (the most occurring under the SR 152 (North) to Road 19 Wye Alternative and the fewest occurring under the Avenue 21 to Road 13 Wye Alternative). These mobile/manufactured homes are included in the estimated residential displacements in Impact SO#3; none of the commercial displacements would be associated with mobile home park businesses.

Table 3.12-12 Estimated Number of Displaced Commercial and Industrial Units

Alternative	Commercial	Industrial/Manufacturing	Total Displaced Business Units
SR 152 (North) to Road 13 Wye	4	4	8
SR 152 (North) to Road 19 Wye	4	4	8
Avenue 21 to Road 13 Wye	0	1	1
SR 152 (North) to Road 11 Wye	4	3	7

Source: ARWS, 2015, 2016
SR = State Route

Some of the displaced businesses are part of the project footprints of the Central Valley Wye alternatives but are not within the permanent right-of-way. It is possible that these businesses may not be permanently displaced, and that some of these relocations may be temporary during construction. These determinations and negotiations would be made later on a parcel-by-parcel basis during the right-of-way acquisition process. For the purposes of this analysis to capture the full potential impact, it is assumed that all displaced businesses would need to relocate.

A search of available properties identified 22 parcels zoned for commercial or industrial uses and 12 businesses that were available for sale near the Central Valley Wye alternatives (Loopnet 2015; Zillow 2015; Showcase.com 2015).²⁰ In Chowchilla, seven parcels of land zoned for commercial, office, or industrial use and 10 buildings used for retail, commercial, industrial/warehousing, and service (gas station) were for sale, while 16 buildings used for retail, office, and industrial were for lease. In Madera Acres, three parcels of land zoned for commercial use and one office building were for sale, while four retail, office, or industrial buildings were for lease. The available properties in unincorporated Madera County and Chowchilla are comparable to the types of business properties affected by the Central Valley Wye alternatives, and it is not anticipated that any of the displaced businesses would pose relocation challenges (e.g., extensive permitting requirements that could limit relocation potential).

The number of available properties and businesses within the relocation RSA exceeds the displacements of businesses for each Central Valley Wye alternative, indicating that there would likely be sufficient available properties exist for business relocations, and that the construction of new buildings to accommodate these displaced buildings is not anticipated to be necessary. The largest surplus of suitable available business properties would occur under the Avenue 21 to Road 13 Wye Alternative, while the smallest surplus would occur under the SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 19 Wye alternatives. Incorporation of SO-IAMF#2, which would provide benefits to displaced individuals to assist them financially and with advisory services related to relocating their residence or business, would minimize potential impacts on communities as a result of business displacements.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to business displacements.

Impact SO#5: Displacements and Relocations of Agricultural Operations

Agricultural lands would account for the largest percentage of acreage to be acquired for construction of the Central Valley Wye alternatives. Each of the Central Valley Wye alternatives would result in the acquisition and permanent conversion of Important Farmland as a result of direct and indirect impacts, as shown in Table 3.12-13. Direct permanent conversion would be greatest under the SR 152 (North) to Road 19 Wye Alternative (2,305 acres) and least under the SR 152 (North) to Road 11 Wye Alternative (2,144 acres). Indirect permanent conversion would

²⁰ Although this data was collected in 2015, it is representative of conditions at the time of publication of this Draft Supplemental EIR/EIS because real estate trends in the relocation RSA have remained stable over time.

occur as a result of parcels of Important Farmland being severed by the Central Valley Wye alternatives. Remnant parcels that are not viable to continue in agricultural use based on access, size, shape, location, or other hardship, would be converted to a nonagricultural use. Because of the very high quality and value of agricultural land in the Central Valley and the Authority's incorporation of a farmland consolidation Program (AG-IAMF#3), which would facilitate the sale of remnant parcels to neighboring landowners to provide for agricultural use on the maximum feasible amount of remnant parcels, the amount of indirect conversion of Important Farmland would be minimized. However, even with incorporation of AG-IAMF#3, the indirect conversion of Important Farmland to nonagricultural use would occur. The greatest amount of conversion would occur under the SR 152 (North) to Road 19 Wye Alternative (232 acres) and least under the SR 152 (North) to Road 11 Wye Alternative (192 acres).

Table 3.12-13 Estimated Agricultural Impacts by Alternative

Alternative	Direct Permanent Conversion of Important Farmland (acres)	Indirect Conversion of Important Farmland Due to Remnant Parcels (acres) ¹	Displaced Agricultural Facilities	Dairies to be Relocated or Reconfigured
SR 152 (North) to Road 13 Wye	2,182	203	21	5
SR 152 (North) to Road 19 Wye	2,305	232	17	2
Avenue 21 to Road 13 Wye	2,263	204	29	4
SR 152 (North) to Road 11 Wye	2,144	192	16	2

Source: ARWS, 2015, 2016; DOC, 2014

¹ Remnant parcels are parcels that could be severed from a larger parcel bisected by the Central Valley Wye alternatives or to which access would be restricted/eliminated. Remnant parcels less than 20 acres have the potential to become unfarmable because of lack of access, irregular shapes or small sizes, or other hardships.

The Central Valley Wye alternatives would displace from 16 to 29 agricultural facilities (e.g., wastewater treatment facilities, sheds, barns, corrals, stables, silos, and dairy pens) (DOC 2014; ARWS 2015).²¹ The Avenue 21 to Road 13 Wye Alternative would displace the most agricultural facilities, while the fewest agricultural facility displacements would occur under the SR 152 (North) to Road 11 Wye Alternative. Although dairies are included in the agricultural facilities displacement category in Table 3.12-3, they were also evaluated separately. The Central Valley Wye alternatives would require the relocation or reconfiguration of from two to five dairies. This would include five dairies under the SR 152 (North) to Road 13 Wye Alternative, two dairies under the SR 152 (North) to Road 19 Wye Alternative, four dairies under the Avenue 21 to Road 13 Wye Alternative, and two dairies under the SR 152 (North) to Road 11 Wye Alternative.

Conversion of lands with agricultural facilities and dairy operations would effectively destroy their capital improvements, in addition to precluding future agricultural uses such as growing forage crops or serving as a waste disposal site (Appendix 3.12-E). For example, converting farmlands that receive dairy waste would require modification of the affected dairy's waste management and nutrient management plans, and could require increased off-site disposal of waste or reducing the size of the dairy's herd. Modifying waste disposal permits for confined animal operations is often onerous, so conversions of land used for waste disposal is likely to be costly for the affected farmer and would reduce the viability of confined animal operations.

²¹ From 51 to 84 acres of the total estimated agricultural impacts are conservatively estimated for the electrical interconnections (tie-lines) associated with the HSR because preliminary engineering has not been developed to further refine impacts within the study corridors. Based on industry standards regarding the size and distance of self-supporting lattice steel tower structures and utility wood poles, the actual permanent impact would likely be less than 1 acre for each tie-line.

Agricultural acquisitions cannot be relocated in the same way that a store or restaurant could be, but neither are they as subject to complete displacement as those businesses are. As described previously, portions of an agricultural parcel would be acquired as needed, and the Authority would compensate the owner, as required, for that land. However, an examination of vacant and for sale agricultural lands and operations was conducted to determine if there would be a sufficient supply of available agricultural land to relocate agricultural facilities and dairies displaced by the Central Valley Wye alternatives. At the time of the analysis, in August 2015, there were 50 agricultural properties of 5 acres or larger for sale or lease within the relocation RSA. These operations include vacant agricultural land, rural-residential agricultural land, as well as land and facilities for pasture/ranch, field crops, vineyards, and dairy (Loopnet 2015). The number of displaced agricultural facilities under the Central Valley Wye alternatives ranged from 16 to 29 agricultural facilities, which indicates that there would likely be a sufficient supply of available agricultural land within the relocation RSA for those agricultural facilities that may be required to relocate. The surplus of available agricultural properties would be greatest under the SR 152 (North) to Road 11 Wye Alternative and smallest under the Avenue 21 to Road 13 Wye Alternative as a result of its displacement of more agricultural facilities.

Most agricultural disruption would not be caused by relocation but rather by the reallocation of agricultural property bought and sold by neighboring operations. For agricultural operations that are required to relocate or be reconfigured, short-term reductions in agricultural production can be expected. Relocated agricultural production (e.g., vine and tree crops) would take time to re-establish itself and return to full production levels. The relocation or reconfiguration of facilities associated with confined animal agriculture operations could require undergoing a time-consuming process to obtain air quality or water quality permits to replace the lost facility. Finally, some displaced agricultural production would be difficult to replace, given the limited availability of suitable replacement lands (e.g., limitations on Prime Farmland and new locations for animal operations). The Authority would provide relocation benefits and advisory services to owners of displaced agricultural operations and would provide owners of confined animal facilities with assistance with obtaining new or amended permits necessary to the continued operation of the facilities (SO-IAMF#2 and AG-IAMF#2). Compensation for any lost production would be incorporated into property values and compensation paid to owners during the land acquisition process. This would minimize disruption to the agricultural community in rural areas of Merced and Madera Counties as a result of the agricultural displacements and relocations.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to agricultural displacements and relocations.

Impact SO#6: Displacements and Relocations of Community and Public Facilities

Community and public facilities, the services and institutions that local populations rely on for their health and welfare and as a means to interact with other members of the community, are limited in the communities RSA. As shown in Figure 3.12-2, the majority of these facilities are located in unincorporated Madera County. The Central Valley Wye alternatives would skirt the community of Chowchilla, avoiding most community and public facilities, and would not affect facilities providing services to sensitive populations (e.g., elderly, disabled, or linguistically isolated residents). Based on a visual interpretation and parcel-by-parcel analysis, the SR 152 (North) to Road 13 Wye Alternative, SR 152 (North) to Road 19 Wye Alternative, and the SR 152 (North) to Road 11 Wye Alternative would result in no acquisitions and displacements of community facilities. The Avenue 21 to Road 13 Wye Alternative’s project footprint encroaches on the property of Alview Elementary School in unincorporated Madera County, resulting in a partial acquisition of the parcel. The alternative would not directly affect the school’s facilities and would not require the relocation or reconfiguration of the school. Therefore, there would be no impact related to the displacement of community or public facilities under any of the alternatives.

CEQA Conclusion

There would be no impact under CEQA under any of the Central Valley Wye alternatives because no displacement or reconfiguration of community and public facilities would occur. As a result,

there would be no physical impacts associated with the provision of new or physically altered facilities, the construction of which could cause significant environmental impacts. Therefore, CEQA does not require any mitigation.

Children's Health and Safety

This section describes potential impacts on children's health and safety as a result of construction of the Central Valley Wye alternatives. These impacts are summarized from other sections of this chapter. Additional information regarding children's health and safety risks from the Central Valley Wye alternatives is provided in Appendix 3.12-C.

Impact SO#7: Temporary Impacts on Children's Health and Safety

Five schools, a childcare facility, and a neighborhood park are all located within 700 feet of the Central Valley Wye alternatives. One elementary school and a childcare facility are located within 460 feet of the SR 152 (North) to Road 13 Wye Alternative. A childcare facility, two elementary schools, a high school, and a neighborhood park are located within 700 feet of the SR 152 (North) to Road 19 Wye Alternative. Two elementary schools are located within the project footprint of the Avenue 21 to Road 13 Wye Alternative due to required utility easements that encroach on the properties. A childcare facility and an elementary school are within 460 feet of the SR 152 (North) to Road 11 Wye Alternative. As such, school bus routes as well as pedestrian and bicycle routes used by children are in close proximity to construction activities, which could result in adverse impacts on children's health and safety.

As discussed in Section 3.2, lane or road closures and detours would cause minor delays to school buses, but alternative routes would continue to be provided as a provision of the construction transportation plan (TR-IAMF#2). The designs of the Central Valley Wye alternatives include identifying when and where temporary closures and detours would occur, with the goal of maintaining traffic flow, especially during peak travel hours. Advance notification of detour routes would be provided to local school districts and traffic control would be rigorously maintained at all school bus loading zones. In addition, any damage to public roads would be repaired by the contractor, minimizing impacts on school buses (TR-IAMF#1). The construction transportation plan would also address maintenance of safe and convenient pedestrian and bicycle access during construction, including access used by children traveling to or from schools and parks (TR-IAMF#4 and TR-IAMF#5). If temporary closures or detours would be required, advance notice would be provided to the community. These impacts would be the same for all the Central Valley Wye alternatives because all four alternatives include the same design features and involve the same types of construction activities with similar construction durations.

As discussed in Section 3.3, construction activities could deteriorate local air quality and affect the health of children, particularly those congregating at the schools, childcare facility, and park located within 1,000 feet of the Central Valley Wye alternatives. According to the air dispersion modeling performed, neither combined nor individual emissions from all construction activities along the Central Valley Wye alternative alignments or Site 7—Le Grand Junction/Sandy Mush Road, Warnerville-Wilson 230 kV Transmission Line, including road crossings and concrete batch plants, would result in pollutant concentrations exceeding the applicable National Ambient Air Quality Standards and California Ambient Air Quality Standards for any pollutant. These construction activities would not contribute to further exacerbation of exceedances of PM₁₀ and PM_{2.5} standards. In addition, the Authority would require construction contractors to prepare a fugitive dust control plan and use measures to minimize fugitive dust emissions. These measures would include limiting visible dust emissions, watering unpaved roads, limiting vehicle travel speed, and suspending dust-generating activities when wind speeds exceed 25 miles per hour (AQ-IAMF#1). The Authority's concrete batch plant siting criteria require these facilities to be at least 1,000 feet from sensitive receptors, including daycare facilities, schools, and parks where children may congregate. The health risk assessment concluded that the incremental increase in cancer risk associated with diesel particulate matter and other pollutants from construction equipment exhaust and concrete batching activities would not exceed the applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) CEQA threshold of 20 in 1 million. Additionally, the acute and chronic hazard indices during construction are anticipated to be 0.7 and 0.0,

respectively, which are below the SJVAPCD CEQA threshold value of 1. The localized health impacts are the same for all of the Central Valley Wye alternatives because all four alternatives include the same types of construction activities with similar construction durations within similar proximities to facilities where children congregate.

As discussed in Section 3.4, sensitive noise receptors include school buildings located within the screening distance of 690 feet. For the three SR 152 alternatives, school buildings are located farther from the project footprints than this screening distance and therefore would not be affected by noise impacts. Under the Avenue 21 to Road 13 Wye Alternative, grading and construction of the HSR embankment would result in daytime noise impacts on the Chowchilla Seventh-day Adventist School. None of the schools would be affected by vibration from construction of the Central Valley Wye alternatives as the school buildings are located too far away from construction activities.

As discussed in Section 3.5, construction of the Central Valley Wye alternatives would not generate a source of EMF or electromagnetic interference that would expose humans, including children, to a documented health risk and would not interfere with implanted medical devices. Therefore, there would be no risk to children from exposure to EMF or electromagnetic interference during construction. The impact would be the same for all four Central Valley Wye alternatives because the levels of electromagnetic interference and EMF generated by construction of all four alternatives would be the same and would occur within similar proximities to facilities where children congregate.

In Section 3.10, there is discussion of potential risks to children from impacts associated with hazardous materials and wastes from construction activities within 0.25 mile of schools and recreation areas. In addition, hazardous wastes such as asbestos-containing materials and lead-based paint could be encountered during construction demolition activities. Fairmead Elementary School and Fairmead Head Start Childcare Center have the potential to be affected under both the SR 152 (North) to Road 13 Wye Alternative and the SR 152 (North) to Road 11 Wye Alternative. Fairmead Elementary School, Fairmead Head Start Childcare Center, Washington Elementary School, and El Capitan High School have the potential to be affected under the SR 152 (North) to Road 19 Wye Alternative. Chowchilla Seventh-day Adventist School and Alview Elementary School have the potential to be affected under the Avenue 21 to Road 13 Wye Alternative. In addition, Fairmead Elementary School, Washington Elementary School, and El Capitan High School have play areas that are open for public use. Richard Bernasconi Park is also located within 0.25 mile of the SR 152 (North) to Road 19 Wye Alternative. The potential for impacts would be highest under the Avenue 21 to Road 13 Wye Alternative as the two schools near this alternative are located within the utility easement required for construction. Any hazardous material usage would be subject to state and federal regulations (HMW-IAMF#1) to minimize the health and safety hazards to students in the event of a release of hazardous materials or wastes (e.g., during transport, use, or disposal). Prior to construction, the Authority would require construction contractors to prepare a plan addressing spill prevention, including prescribed best management practices that must be followed to prevent spills and address spills if they occur (HMW-IAMF#4). These design features would minimize, but not entirely avoid, the potential risks of emissions or the release of hazardous materials and wastes in proximity to schools and recreational areas.

In Section 3.11, there is discussion about required temporary road closures during construction that would disrupt local circulation patterns, resulting in detours and traffic delays, and construction-related traffic. As a result, construction has the potential to temporarily affect the safety of children traveling to schools. Prior to construction, the Authority's contractor would develop a construction safety transportation plan (SS-IAMF#1) in coordination with local jurisdictions responsible for maintaining emergency vehicle access during construction. This plan would address communications, safety controls, and traffic controls to minimize impacts and maintain access, and would outline transportation detours and plans to accommodate school bus routes, bicycles, and pedestrians. These measures would promote the health and safety of children by creating safe travel conditions for them. The project design features (SS-IAMF#1 and SS-IAMF#2) would reduce the potential exposure of children to construction site safety hazards

by restricting access to construction areas. In addition, the Authority and construction contractor would prepare and comply with system safety program plans, rail safety standards, worker safety standards, crime prevention design guidelines, safety and health plans, fire/life safety programs, security plans, and emergency procedures to maintain the safety and security of all members of the public during construction and operations of the HSR system.

CEQA Conclusion

There is no specific requirement in California for an analysis of children's health impacts, separate from that of other individuals; however, there are requirements to evaluate environmental and community impacts on places children congregate such as schools and parks, as well as facilities particularly used by children such as pedestrian and bicycle routes. The following summarizes the CEQA conclusions for each of these topic areas, as discussed in more detail in other sections of this chapter.

As discussed under Impacts TR#16, Temporary Impacts on School Bus Routes, and TR#18, Temporary Impacts on Pedestrian and Bicycle Access, temporary construction impacts on school bus routes as well as pedestrian and bicycle routes would be less than significant for all of the Central Valley Wye alternatives because temporary alterations to these routes would not substantially increase hazards or create safety risks for children. Therefore, CEQA does not require any mitigation.

As discussed under Impacts AQ#1, Temporary Direct Impacts on Air Quality within the SJVAB, and AQ#2, Temporary Direct Impacts on Implementation of an Applicable Air Quality Plan, temporary construction impacts on air quality and localized health effects would be less than significant because the incremental increase in cancer risk associated with diesel particulate matter and other pollutants from Central Valley Wye alternatives construction would not exceed the SJVAPCD's cancer risk threshold of 20 in 1 million, the hazard index threshold of 1, or the National Ambient Air Quality Standards and California Ambient Air Quality Standards for PM₁₀. Additionally, the construction of the Central Valley Wye alternatives includes effective measures to minimize fugitive dust emissions. Therefore, CEQA does not require any mitigation.

As discussed under Impact NV#1, temporary construction noise impacts would result in daytime noise impacts on the Chowchilla Seventh-day Adventist School under the Avenue 21 to Road 13 Wye Alternative and would be significant under CEQA. No other schools or parks would be adversely affected under any of the other Central Valley Wye alternatives. Implementation of NV-MM#1 would minimize noise impacts by requiring the contractor to prepare a noise-monitoring program, apply recommended FRA construction mitigation procedures, and conduct construction noise monitoring. With implementation of this mitigation measure, the impacts would be reduced to less than significant under CEQA. There would be no impact under CEQA for vibration impacts on school buildings as none of the Central Valley Wye alternatives would expose school buildings to excessive groundborne vibration.

As discussed under Impact EMF/EMI#1, Temporary Impacts from Use of Construction Equipment, construction of the Central Valley Wye alternatives would not generate electromagnetic interference at levels that would expose a person to a documented health risk or interfere with implanted medical devices, and impacts would be less-than-significant under CEQA. Therefore, CEQA does not require any mitigation.

As discussed under Impact HMW#5, Temporary Effects from Hazardous Materials and Wastes Activities in Proximity to Schools and Recreational Areas, potential children's health or safety risks from hazardous materials and wastes to the five schools, childcare facility, and neighborhood park within 0.25 mile of construction would be significant under CEQA. The Central Valley Wye alternatives would incorporate IAMFs that would establish conformance with all applicable regulations associated with hazardous materials and waste transport use, disposal, and emissions, and would require the incorporation of a spill response plan prior to the start of construction activities. With the implementation of IAMFs and HMW-MM#1: Limit Use of Extremely Hazardous Materials near Schools during Construction, to minimize overall risks and limit the use of extremely hazardous materials near schools and recreation areas, the impact under CEQA would be less than significant.

As discussed under Impact SS#4, Temporary Motor Vehicle, Pedestrian, and Bicycle Safety Risks, safety plans, design standards and features would be incorporated during construction and impacts on bicyclists and pedestrians, including children, would be minimized. Impacts under CEQA would be less than significant. Therefore, CEQA does not require any mitigation.

In conclusion, the temporary construction impacts on children's health and safety associated with impacts on school bus routes, pedestrian and bicycle routes, air quality and localized health risks to children, and health risks from electromagnetic interference would be less than significant under all of the Central Valley Wye alternatives. Temporary construction noise impacts on the Chowchilla Seventh-day Adventist School under the Avenue 21 to Road 13 Wye Alternative and risks from hazardous materials and wastes under all of the Central Valley Wye alternatives would be significant under CEQA. With the implementation of NV-MM#1 and HMW-MM#1, these CEQA impacts would be reduced to less than significant.

Impact SO#8: Permanent Impacts on Children's Health and Safety

Five schools, a childcare facility, and a neighborhood park are all located within close proximity to the Central Valley Wye alternatives. These facilities could be affected by permanent changes to transportation facilities and routes that could result in impacts on children's health and safety.

As discussed in Section 3.2, construction of the Central Valley Wye alternatives would include the installation of grade separations that would provide new crossings over existing transportation corridors, including local roadways, highways, and railroad tracks. These new grade separations would remove conflicts with motorists, pedestrians, bicyclists, and railroads. In addition, grade separations along SR 152 would upgrade this transportation facility from highway to freeway design standards. Some existing at-grade roadway crossings, mostly local roadways, would be closed. Traffic would be re-routed to existing or new overcrossings or undercrossings occurring every 2 to 5 miles. The greatest out-of-direction travel distance required for school buses would be 3.1 miles for each of the Central Valley Wye alternatives, an approximate 10 percent increase in travel distance compared to total average roundtrip mileage for bus routes. These new grade separations and transportation facility upgrades would improve safety and access for children walking or biking to schools and parks as well as improve operations safety for school bus routes. These changes would provide a permanent benefit to children's health and safety.

As discussed in Section 3.4, Impact NV#4, Permanent Traffic-Generated Noise from Realigned State Highways and Local Roads, the three SR 152 alternatives would expose two single-family sensitive receptors to an increase in traffic noise from a realignment of state and local roads. Children could live at these residences and would be exposed to increased traffic noise if they are present.

CEQA Conclusion

There is no specific requirement in California for an analysis of children's health impacts, separate from that of other individuals; however, there are requirements to evaluate environmental and community impacts on facilities used by children such as schools, bus routes, and pedestrian and bicycle safety and access. The CEQA conclusions from these topic areas are summarized here.

The construction of the Central Valley Wye alternatives would result in less-than-significant impacts under CEQA for issues related to traffic hazards. Permanent changes in design and roadway networks would not result in an impact under CEQA because highway and local roadway improvements would be incorporated into each of the Central Valley Wye alternatives, permanently reducing the exposure of pedestrians and bicyclists, including children, to traffic hazards. Alterations to school bus routes would not increase hazards or create safety risks for school bus users. Permanent changes to pedestrian and bicycle facilities would provide enhanced and safe access. Therefore, CEQA does not require any mitigation.

Construction of any of the SR 152 alternatives would result in increased traffic noise at two single-family residential sensitive receptors, resulting in a significant impact under CEQA. Mitigation measure NV-MM#3, Implement Proposed California High-Speed Rail Project Noise and Vibration Mitigation Guidelines, would be implemented to minimize this impact, but it would

not avoid it. The impact would remain significant and unavoidable with implementation of mitigation.

Economic Impacts

The following discussions address possible economic impacts from the construction of the Central Valley Wye alternatives. Potential impacts from Central Valley Wye alternatives construction include changes to employment, agricultural economy, and property and sales tax revenues.

Impact SO#9: Temporary Impacts on Employment

Construction of the Central Valley Wye alternatives would employ workers in the regional labor force and has the potential to attract small numbers of workers from outside the region to fulfill needs for workers with special skills. Construction work associated with the network upgrades would be performed by either Pacific Gas & Electric (PG&E) construction crews or contractors, depending on the availability of PG&E construction personnel (up to 45 peak workers) at the time of construction, typically from within the counties where the work is occurring or from adjacent areas. Any increase in population from in-migrating construction workers would not affect the ability of local jurisdictions to provide government and public services because the number of workers is expected to be small relative to the larger residential population. Overall, potential employment growth from construction of the Central Valley Wye alternatives is expected to be a net benefit for the four-county region of Stanislaus, Merced, Madera, and Fresno Counties during the 4-year construction period. As described in more detail in Section 3.18 under the discussion of Construction-Related Employment Impacts, it is estimated that construction of the Central Valley Wye alternatives would create an additional 8,120 to 9,450 direct, indirect, and induced annual jobs within Merced, Madera, and Fresno Counties during the four years of construction. Construction of the SR 152 (North) to Road 19 Wye Alternative would generate the most jobs (9,450), while construction of the SR 152 (North) to Road 11 Wye Alternative would generate the fewest jobs (8,120). The demand for workers related to construction would be a benefit to employment in the economic impact RSA under all of the Central Valley Wye alternatives, but to the highest degree under the SR 152 (North) to Road 19 Wye Alternative and the least degree under the SR 152 (North) to Road 11 Wye Alternative. Job creation would peak during the years of heaviest construction (in 2020) and could represent a need for around 2,840 to 3,310 direct, indirect, and induced workers annually.²²

In terms of workers to fill these jobs, the average annual unemployment rate for the three-county region of Merced, Madera, and Fresno Counties was 10.4 percent in 2015 (CEDD 2015). While this indicates a recovery from the 2007 to 2009 recession, during which the unemployment rate for the region reached approximately 17 percent, it is still higher than the unemployment rate in 2000, demonstrating that the region is still recovering from the effects of the recession. This relatively high unemployment rate, in combination with the fact that the demand for construction workers is estimated to account for only a small percentage (approximately 4 to 5 percent) of the construction employment projected for 2020, contributes to the conclusion that the construction labor force in the region is anticipated to meet the demand for construction workers to construct the Central Valley Wye alternatives.

The Authority is committed to ensuring that no person in the state of California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and Related Statutes. As described in Section 3.18, the Authority and others have been implementing a variety of programs to increase the ability of local workers and construction firms to compete for and obtain construction jobs associated with the HSR system. To increase the ability of local workers to compete for available construction jobs, the Authority has made a

²² A 1-year full-time job equivalent is one person fully employed for 1 year. It is likely that many of the jobs created would be held by the same person for more than a single year. Therefore, the total annual employment during the heaviest period of construction is also presented to better identify the peak number of job openings created and the number of additional workers who would be needed in the region.

commitment through a cooperative partnership with skilled craft, unions, and contractors to promote and help implement education, apprenticeship training, advanced communication about hiring opportunities, and contractor networking opportunities for local workers. The program, referred to as the Community Benefits Agreement, is intended to help disadvantaged workers, such as those who are lower-income, veterans, single parents, have no high school or General Education Development diploma, and/or suffer from chronic unemployment. The commitment includes setting a hiring goal that 30 percent of all construction work hours be filled by disadvantaged workers. The Authority also has committed to a 30 percent small business participation goal for all of the Authority's construction.²³

Considering the demand for both construction workers as well as other workers to fill indirect and induced jobs, the small cities and towns in the vicinity of the Central Valley Wye alternatives are not expected to experience an influx of new residents associated with construction, nor would local government services, emergency responders, or schools experience increased demand for services from new residents. The majority of construction workers are anticipated to be residents of Madera, Merced, or Fresno County who would drive or carpool to active construction sites and return home at the end of the day. A small number of specialized workers could come to work for short periods, but they would likely stay in area motels. Therefore, growth-related impacts from construction are not anticipated under any of the Central Valley Wye alternatives.

CEQA Conclusion

The impact under CEQA would be less than significant, because the number of workers is expected to be small and any increase in population from in-migrating construction workers would not affect the ability of local jurisdictions to provide government and public services. Therefore, CEQA does not require any mitigation.

Impact SO#10: Permanent Impacts on School District Funding from Student Relocations

An important fiscal issue for local communities is the potential impact of the Central Valley Wye alternatives on school district funding. High concentrations of residential displacements have the potential to relocate large numbers of school-age residents outside of their current school districts. School district funding is partially dependent on student attendance, and the relocation of large populations of students outside existing school districts could therefore reduce funding for the affected school districts. The details of this analysis and complete results by school district can be found in the Community Impact Assessment (Authority and FRA 2016a). Further discussion of impacts on public school district funding can be found in Appendix 3.12-D.

SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative, would displace 96 residences, and affect an estimated 68 students (0.1 percent of the school district enrollment). The highest proportion of affected students would be in the Chowchilla Elementary School District (up to 35 affected students accounting for 1.6 percent of district enrollment) and Chowchilla Union High School District (up to 23 affected students accounting for 2.2 percent of district enrollment). The Chowchilla Elementary School District and Chowchilla Union High School District extend across Chowchilla, Fairmead, and unincorporated Madera County, where up to 87 single-family residences would be displaced. In August 2015, 112 available residential relocation units were identified in these same communities—a potential surplus of 25 residences (Table 3.12-11). Based on these findings, there would be sufficient residential relocation resources for displaced residents to relocate within the same school district. As a result, there would little to no effect on school district funding because of student relocations.

SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative would displace 119 residences and affect an estimated 85 students (0.2 percent of the school district enrollment). Similar to the SR 152 (North) to Road 13 Wye Alternative, the highest proportion of affected students would be in the

²³ Additional information about these programs is available: http://hsr.ca.gov/Programs/Small_Business/index.html and <http://www.hsr.ca.gov/Programs/Construction/index.html>.

Chowchilla Elementary School District (up to 50 affected students accounting for 2.3 percent of district enrollment) and Chowchilla Union High School District (up to 21 affected students accounting for 2.1 percent of district enrollment). The Chowchilla Elementary School District and Chowchilla Union High School District extend across Chowchilla, the community of Fairmead, and unincorporated Madera County, where up to 109 single-family residences would be displaced. In August 2015, 112 available residential relocation units were identified in these same communities (Table 3.12-11). Based on these findings, there would be sufficient residential relocation resources for displaced residents to relocate within the same school district. As a result, there would little to no effect on school district funding related to student relocations.

Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative would result in the displacement of 65 residences, affecting an estimated 46 students (0.1 percent of the school district enrollment). The highest proportion of affected students would be in Chowchilla Union High School District (up to 15 affected students accounting for 1.4 percent of district enrollment) and Alview-Dairyland Union Elementary School District (up to 21 affected students accounting for 6.1 percent of district enrollment). The Chowchilla Elementary School District and Chowchilla Union High School District extend across Chowchilla, the community of Fairmead, and unincorporated Madera County, where up to 59 single-family residences would be displaced. Within the same approximate geographic area, 112 available residential relocation units were identified, resulting in a surplus of 53 available residential relocation properties. An estimated 42 residential displacements are anticipated within the Alview-Dairyland Union Elementary School District, a school district located entirely within rural unincorporated Madera County to the south and east of Chowchilla. In August 2015, 29 available relocation units were identified in unincorporated Madera County, resulting in a deficit of approximately 13 residences. This indicates that there may be insufficient available residential units within the Alview-Dairyland Union Elementary School District to guarantee that residents could be relocated within the district. The relocation of students outside of the Alview-Dairyland Union Elementary School District would result in a minor revenue loss for the district.

SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would displace 62 residences and affect an estimated 45 students (0.1 percent of the school district enrollment). The highest proportion of affected students would be in the Chowchilla Elementary School District (up to 34 affected students accounting for 1.6 percent of district enrollment) and Chowchilla Union High School District (up to 23 affected students accounting for 2.2 percent of district enrollment). The Chowchilla Elementary School District and Chowchilla Union High School District extend across Chowchilla, the community of Fairmead, and unincorporated Madera County, where up to 53 single-family residences would be displaced. In August 2015, 112 available residential relocation units were identified in these same communities—a potential surplus of 59 residences (Table 3.12-11). Based on these findings, there would be sufficient residential relocation resources for displaced residents to relocate within the same school district. As a result, there would little to no effect on school district funding related to student relocations.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Impact SO#11: Permanent Impacts on School District Funding from Reduced Property Tax Revenues

Construction of the Central Valley Wye alternatives could result in the acquisition and displacement of residences, which would remove some private property from the local property tax rolls. Because school districts are funded, in part, from property taxes, it is likely that the removal of some private properties would result in a net reduction in the local property tax revenues available to school districts.

Property tax revenues are likely to decrease regardless of whether a residential property owner or business owner relocates within the same jurisdiction because construction of the Central Valley

Wye alternatives would result in a net decrease in the number of properties on the tax rolls of Merced and Madera Counties. Accordingly, any revenue reductions could result in the reduction of school funding. The estimated reductions in property tax revenues caused by construction of the Central Valley Wye alternatives is presented in Table 3.12-14. The SR 152 (North) to Road 19 Wye Alternative would result in the greatest reduction of property tax revenue—\$906,200 annually for Merced and Madera Counties. The Avenue 21 to Road 13 Wye Alternative would result in the smallest reduction of property tax revenue—\$688,800 annually for Merced and Madera Counties (Authority and FRA 2016e). The combined estimated amount represents 0.2 to 0.3 percent of the total FY 2013/2014 combined property tax revenue of \$315.2 million of the counties, city, and communities in the economic impact RSA. School district funding would constitute a portion of this loss. The impact would be slight, given the small percentage of total annual property tax losses. However, within the current context of challenging budget deficits for county and city jurisdictions, any reduction to school district funding related to property tax revenues would be of consequence.

Table 3.12-14 Estimated Reduction in Property Tax Revenue due to Property Acquisition

Alternative	Merced County	Madera County	Total
SR 152 (North) to Road 13 Wye	\$130,700	\$667,600	\$798,300
SR 152 (North) to Road 19 Wye	\$179,700	\$726,500	\$906,200
Avenue 21 to Road 13 Wye	\$106,300	\$582,500	\$688,800
SR 152 (North) to Road 11 Wye	\$125,600	\$577,300	\$702,900

Source: Authority and FRA, 2016e

Calculated based on the estimated land and improvements costs for right-of-way acquisition.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Impact SO#12: Permanent Changes in School Bus Transportation

Operating school buses to take children to and from school every day is a key expense for school districts. Fuel costs are directly related to the distance traveled by the buses on their routes. Central Valley Wye alternatives–related roadway modifications may change some access and routing of school buses because of road closures, but alternative routes would be provided to minimize any potential impacts. Construction of the Central Valley Wye alternatives would require permanent closure of 30–38 roads. The most permanent road closures would occur under the SR 152 (North) to Road 13 Wye Alternative (38) followed by SR 152 (North) to Road 19 Wye Alternative (36) and SR 152 (North) to Road 11 Wye Alternative (33). The fewest permanent road closures would occur under the Avenue 21 to Road 13 Wye Alternative (30). The Central Valley Wye alternatives would also result in the construction of roadway overcrossings or undercrossings. There would be 24 roadway overcrossings or undercrossings for the SR 152 (North) to Road 13 Wye Alternative, 29 for the SR 152 (North) to Road 19 Wye Alternative, 28 for the Avenue 21 to Road 13 Wye Alternative, and 24 for the SR 152 to Road 11 Wye Alternative. Refer to the *Merced to Fresno Section: Central Valley Wye Transportation Technical Report* (Authority and FRA 2016c) for complete information on the locations of roadway closures and new crossings.

When crossings are not constructed in the same locations as the road closures, drivers would be required to travel out-of-direction. The Community Impact Assessment (Authority and FRA 2016a) provides a list of permanent road closures by school district and indicates the out-of-direction travel that would be required as a result of the road closures. The greatest out-of-direction travel distance required for school buses would be 3.1 miles for each of the Central Valley Wye alternatives. This represents an approximately 10 percent increase in travel distance when compared to the total average roundtrip mileage (25–35 miles) of the bus routes. This

increased out-of-direction would result in a corresponding increase in fuel costs for school districts.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Impact SO#13: Temporary Impacts on Agricultural Economy—Noise and Vibration

Construction of the Central Valley Wye alternatives would generate noise and vibration from construction equipment and vehicles (e.g., clearing, grading, track installation). The loudest expected noise levels from construction of the Central Valley Wye alternatives are estimated to be 81 A-weighted decibels (dBA) for the 8-hour equivalent sound level (L_{eq}) at 50 feet, and 75 dBA for the 8-hour L_{eq} at 100 feet (see Section 3.4). To assess construction noise vibration, analysts used the FRA-established interim threshold for HSR noise impacts on livestock of 100 dBA sound exposure level (SEL) at 100 feet. As shown in Table 3.12-15, portions of 5 to 12 dairies would be within 100 feet of the Central Valley Wye alternatives, and these dairies could experience temporary noise impacts during construction. Of the Central Valley Wye alternatives, the Avenue 21 to Road 13 Wye Alternative would expose the most dairies (12) to construction noise impacts, while the SR 152 (North) to Road 19 Wye Alternative and the SR 152 (North) to Road 11 Wye Alternative would expose the fewest dairies (5 each) to construction noise impacts.

Table 3.12-15 Dairies Affected by Temporary Noise and Vibration by Alternative

Alternative	Number of Dairies within 100 feet
SR 152 (North) to Road 13 Wye	9
SR 152 (North) to Road 19 Wye	5
Avenue 21 to Road 13 Wye	12
SR 152 (North) to Road 11 Wye	5

Source: DOC, 2012, 2015

A wide range of studies have been conducted concerning noise and/or vibration impacts on confined animals, such as dairy cows. Such impacts also could affect unconfined grazing cattle. Mammals in particular appear to react to noise at sound levels exceeding 90 dBA). General noise at 105 dB, but not at 80 dB, could result in reduced milk yield, rate of milk release, and feed intake by dairy cows (Kovalcik and Sottnik 1971). Responses to loud noises include the startle response, avoidance of the sound source, or negative behavior by wildlife species. As described previously, the Central Valley Wye alternatives construction noise would not exceed 75 dBA for the 8-hour L_{eq} at 100 feet, which would be below the levels determined by research to reduce milk production; therefore, impacts on these confined animal facilities, loss of milk production, and the agricultural economy as a whole are not anticipated for any of the Central Valley Wye alternatives. The exposure of animals to noise would be temporary and is not expected to lead to the conversion of Important Farmland to a nonagricultural use. Agricultural communities and dairy production would continue to exist and operate as they do now.

No criteria have been established for vibration impacts on domestic animals or poultry. While the potential impacts of vibration on farm animals are not known, the exposure of animals to vibration would be temporary and is therefore not expected to lead to the conversion of Important Farmland to a nonagricultural use. Agricultural communities and dairy production would continue to exist and operate as they do now.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to impacts on the agricultural economy.

Impact SO#14: Permanent Impacts on Agricultural Economy

Acquisition and Permanent Conversion

Construction of the Central Valley Wye alternatives would require the acquisition and permanent conversion of agricultural lands and associated crops and confined animal agriculture facilities. Agricultural lands are not replaceable, and therefore their conversion results in the permanent depletion of agricultural resources. Impacts related to the direct conversion of agricultural land are addressed in Section 3.14. This analysis focuses on economic impacts of this conversion. Refer to Appendix D, Agricultural Production, of the Community Impact Assessment (Authority and FRA 2016a) for a detailed analysis of agricultural production.

Compensation for any lost production would be incorporated into property values and compensation paid to owners during the land acquisition process. This includes any value of existing assets (such as orchards) that have a future value for production. However, it is important to note that there is likely to be production that cannot easily be relocated even after compensation. Moreover, some relocated agricultural production could take time to re-establish itself and return to full production levels, such as relocated vine and tree crops that take time to mature. In addition, the relocation of wastewater application lands or a waste treatment pond could require undergoing a time-consuming process to obtain new air quality or water quality permits to replace the existing permits associated with the displaced facility. Also, any full acquisition of an animal operation could require the entire operation to relocate, a difficult and time-consuming process given the existing regulatory requirements. The Authority would assist owners of affected confined animal agriculture facilities with obtaining new or amended permits necessary to the continued operation or relocation of the facility (AG-IAMF#2). This would streamline the process of obtaining new or modified permits, reducing the time and cost of permitting for affected landowners, and would encourage facility owners to continue to operate rather than close facilities. However, given the time likely required to relocate affected crop and animal operations, some short-term reduction in agricultural production can be expected.

The Central Valley Wye alternatives would require displacement of 2,471 to 2,666 acres of agricultural lands, depending upon the alternative. The greatest amount of displacement would occur under the SR 152 (North) to Road 19 Wye Alternative, and the least amount would occur under the SR 152 (North) to Road 11 Wye Alternative. The Avenue 21 to Road 13 Wye Alternative and SR 152 (North) to Road 13 Wye Alternative would displace 2,501 and 2,513 acres of agricultural lands, respectively. The Authority would implement mitigation measure AG-MM#1, Conserve Important Farmland (Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland), discussed in Section 3.14, to offset these impacts by preserving Important Farmland in an amount commensurate with the quality and quantity of the displaced farmland. Employment in the agricultural sector accounted for about 18.1 percent and 25 percent of the total industry employment in 2014 in Merced and Madera Counties, respectively (CEDD 2015). The loss of agricultural land could result in a reduction of employment opportunities for farm workers who could be negatively affected if the acquisition results in permanent job losses or if the workers are unable to find work on another farm or industry in the region. This impact could be lessened if the agricultural production is relocated elsewhere in the two-county region. Table 3.12-16 summarizes the projected economic and employment impacts of agricultural acquisitions for Merced and Madera Counties by alternative. Construction of the Central Valley Wye alternatives would result in an estimated total annual reduction in revenues from \$7.6 million to \$8.6 million. The greatest amount of revenue loss would occur under the SR 152 (North) to Road 19 Wye Alternative, while the least amount of revenue loss would occur under the Avenue 21 to Road 13 Wye Alternative. The SR 152 (North) to Road 11 Wye Alternative and SR 152 (North) to Road 13 Wye Alternative would result in a reduction in revenues of \$7.9 million and \$8.4 million, respectively. This revenue loss represents approximately less than 0.1 percent of the region's estimated \$4.8 billion annual agricultural production, a very small amount of the total annual revenue generated by agricultural production within Merced and Madera Counties (CDFA 2012). The conversion of agricultural land uses would also result in an impact on agricultural employment, reducing employment between 77 and 86 employees. The greatest amount of job loss would occur under the SR 152 (North) to Road 19

Wye Alternative, while fewest jobs would be lost under the SR 152 (North) to Road 11 Wye Alternative. The Avenue 21 to Road 13 Wye Alternative and SR 152 (North) to Road 13 Wye Alternative would result in job losses of 79 and 80 employees, respectively.

Table 3.12-16 Projected Economic and Employment Impacts of Changes in Agricultural Production

Alternative	Maximum Acres Displaced Farmland ¹			Estimated Revenue Loss in County (\$ Million)			Estimated Job Loss in County		
	Merced County	Madera County	Total	Merced County	Madera County	Total	Merced County	Madera County	Total
SR 152 (North) to Road 13 Wye	880	1,634	2,513	\$2.0	\$6.4	\$8.4	18	62	80
SR 152 (North) to Road 19 Wye	1,020	1,645	2,666	\$2.5	\$6.1	\$8.6	24	61	86
Avenue 21 to Road 13 Wye	792	1,709	2,501	\$1.1	\$6.5	\$7.6	13	66	79
SR 152 (North) to Road 11 Wye	842	1,629	2,471	\$1.9	\$6.0	\$7.9	18	60	77

Source: Merced County, 2013; Madera County, 2013; CEDD, 2015; DOC, 2014; CDFA, 2015

¹ The estimated acres of displaced farmland within this table differs from that presented in Table 3.12-13, because of the use of different farmland datasets and types of farmland included in the analysis. While Table 3.12-13 focused on conversion of Important Farmland, all farmland types are assessed for the purpose of assessing agricultural economic impacts.

In addition to the economic impacts on the agricultural economy caused by acquisition and permanent conversion of agricultural lands, construction of the Central Valley Wye alternatives could result in partial parcel acquisitions that could create remnant parcels that are smaller than the county threshold for Williamson Act or FSZ contracts.²⁴ Creation of remnant parcels below each county's threshold for Williamson Act and FSZ contracts could result in a change in a parcel's tax status that may affect agricultural profitability. Table 3.12-17 identifies the acreages of land and number of parcels of Williamson Act and FSZ contracts that would fall below county thresholds for Williamson Act or FSZ contracts. The SR 152 (North) to Road 13 Wye Alternative and SR 152 (North) to Road 19 Wye Alternative would produce the most parcels and acres at risk of losing associated property tax benefits, while the Avenue 21 to Road 13 Wye Alternative would produce the fewest parcels and acres at risk of losing property tax benefits associated with Williamson Act or FSZ contracts. Although these lands would lose the Williamson Act and FSZ contracts, and could result in a greater tax burden for landowners, as described in Section 3.14, conversion of these lands to nonagricultural use is not expected because of the high value of farmland in the Central Valley.

²⁴ Merced County sets minimum acreage requirements for Williamson Act contracts of 10 acres for Prime Farmland and 80 acres for Nonprime Farmland. Madera County sets minimum acreage requirements for Williamson Act contracts of 10 acres for Prime Farmland and 40 acres for Nonprime Farmland. The Madera County threshold for FSZ lands is 100 acres.

Table 3.12-17 Williamson Act and FSZ Remnant Parcels below County Thresholds, by Alternative

Alternative	Williamson Act Land Total		FSZ Total	
	Acres	Parcels	Acres	Parcels
SR 152 (North) to Road 13 Wye	245	14	180	5
SR 152 (North) to Road 19 Wye	203	14	184	5
Avenue 21 to Road 13 Wye	94	11	136	3
SR 152 (North) to Road 11 Wye	155	11	155	4

Source: Authority and FRA, 2018
 FSZ = Farmland Security Zone
 SR = State Route

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts from the acquisition and conversion of agricultural farmland.

Agricultural Operations

In addition to agricultural acquisitions, the Central Valley Wye alternatives would result in permanent road closures, which can impact access for agricultural operations. These impacts include increased costs to operations and increased difficulties in moving workers and equipment to cultivate and harvest fields and in delivering products to processing facilities and markets. At this stage in the design of the Central Valley Wye alternatives, the Authority and FRA have not determined these potential impacts at the level of the individual operation (i.e., for each farm or ranch operation). The cost to individual producers and the impact of severed parcels on operational feasibility and value would be considered on a case-by-case basis during the property acquisition phase. As described in Section 3.2, the road closures associated with the Central Valley Wye alternatives would be dispersed, detours to alternative routes would be at intervals of approximately 2 miles or less, and alternate access to affected properties would be provided. Additionally, the Authority would incorporate a CMP under SO-IAMF#1 and measures under TR-IAMF#1, TR-IAMF#2, TR-IAMF#6, and TR-IAMF#7 to help minimize traffic-related impacts.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts from changes to agricultural operations.

Impact SO#15: Permanent Impacts on County and City Property Tax Revenues from Property Acquisition

Table 3.12-18 summarizes property tax revenue loss for Merced and Madera Counties. The Central Valley Wye alternatives would affect tax revenues for Merced and Madera Counties, with the greater effect on Madera County. The SR 152 (North) to Road 19 Wye Alternative would result in the greatest reduction of property tax revenue—\$906,200 annually for Merced and Madera Counties. The Avenue 21 to Road 13 Wye Alternative would result in the smallest reduction of property tax revenue—\$688,800 annually for Merced and Madera Counties (Authority and FRA 2016e). Overall, the loss of property tax revenue from acquisitions would be small when compared to the total property tax revenues collected by the counties; the estimated lost property tax revenue accounts for approximately 0.2 percent of the county general fund property tax revenues. Details of the impacts on individual county and city property tax revenues are provided in the Community Impact Assessment (Authority and FRA 2016a).

Table 3.12-18 Annual Lost Property Tax Revenues (2015)

Alternative	Estimated Value for Acquired Property	Estimated Property Tax Revenue of Acquired Properties for Merced and Madera Counties (\$ Thousands)	Lost Property Tax Revenues (as % of FY 2013/2014 County General Fund Property Tax Revenues) ¹
SR 152 (North) to Road 13 Wye	\$73,459,500	\$798,300	0.3
SR 152 (North) to Road 19 Wye	\$83,448,500	\$906,200	0.3
Avenue 21 to Road 13 Wye	\$63,381,000	\$688,800	0.2
SR 152 (North) to Road 11 Wye	\$64,709,000	\$702,900	0.2

Source: ARWS, 2015, 2016; CBOE, 2015; Parcelquest, 2016

FY = fiscal year

SR = State Route

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Impact SO#16: Temporary Impacts on Sales Tax Revenues

A temporary increase in sales tax revenues is expected for Merced and Madera Counties and the communities in the region as a result of Central Valley Wye alternatives construction. This increase would be a result of spending on construction equipment and materials. Unless specifically exempted, all transactions for tangible assets related to the Central Valley Wye alternatives would be subject to sales tax.

It is estimated that roughly 17 percent of the total Central Valley Wye alternatives spending on construction equipment and materials would occur within the two-county region. The Central Valley Wye alternatives are estimated to generate about 0.75 percent in sales tax revenues for the region during the construction period. Estimated increases in tax revenues are \$2.90 million to \$3.38 million for Merced County and \$1.70 million to \$1.99 million for Madera County (Authority and FRA 2016d). The sales tax revenue generated from construction activities would increase local government revenues during the construction period by up to \$5.4 million under the SR 152 (North) to Road 19 Wye Alternative and \$4.61 million under the SR 15 (North) to Road 11 Wye Alternative. Some short-term reductions in sales tax revenues could occur because the need to acquire land would necessitate the relocation of businesses along the Central Valley Wye alternatives. While negligible at the regional level, this interruption in sales could lead to some potential short-term losses for communities adjacent to the Central Valley Wye alternatives. As discussed previously in the examination of suitable replacement properties for relocated businesses, most businesses would have the opportunity to relocate within the same city tax jurisdiction. As such, the duration of business disruptions would be expected to be minimal.

Relocations of businesses in the same vicinity would limit losses in sales tax revenues for local jurisdictions; however, the potential for temporary sales tax loss would remain, either because businesses would temporarily close during these relocations or because some might choose to close down rather than relocate. Although other businesses would eventually replace those that close, temporary revenue losses could nevertheless occur.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Operations Impacts

Operations of the Central Valley Wye alternatives would include inspection and maintenance along the track and railroad right-of-way, as well as on the structures, fencing, power system, automatic train control, and communications. Operations and maintenance activities are described in Chapter 2.

Disruption or Severance of Community Interactions or Division of Established Communities

The majority of the impact of division or disruption to communities located along the Central Valley Wye alternatives would occur during construction and is discussed under Impact SO#1 and Impact SO#2. After construction, community members would use new transportation routes and would not be affected by construction noise, congestion, dust, or visual impacts. New community interactions would take place, and the HSR alignment would become part of the visual and functional environment in which these communities exist. Operation of the Central Valley Wye alternatives would have permanent noise impacts, which could affect community cohesion within Fairmead.

Impact SO#17: Permanent Noise Impacts on Community Cohesion

Operations of the Central Valley Wye alternatives would introduce a new source of noise to the area from the passing of trains and operation of maintenance equipment. The SR 152 (North) to Road 11 Wye Alternative would have severe or moderate noise impacts on the most receptors (96), followed by the SR 152 (North) to Road 13 Wye Alternative (92), and the SR 152 (North) to Road 19 Wye Alternative (81); the fewest severe or moderate noise impacts would occur under the Avenue 21 to Road 13 Wye Alternative (79). The largest concentration of impacts would occur within the community of Fairmead under the SR 152 alternatives. The SR 152 (North) to Road 19 Wye Alternative would have the most severe or moderate noise impacts within Fairmead (36, which is approximately 45 percent of the alternatives' total noise impacts), while the Avenue 21 to Road 13 Wye Alternative would have the fewest noise impacts within Fairmead (7, which is approximately 9 percent of the alternatives' total noise impacts). As described in Section 3.4, the Authority would implement noise mitigation (NV-MM#2 and NV-MM#3), which would include noise reduction techniques to reduce sound levels during operations, including the installation of building sound insulation or the establishment of noise easements. Although this mitigation measure may provide some level of noise attenuation for affected residences, it is not anticipated to mitigate all severe operations noise impacts. No moderate or severe noise impacts would occur at Fairmead Elementary School, Fairmead Head Start, or other community facilities under any of the Central Valley Wye alternatives.

While residents within the community of Fairmead would perceive operations noise and vibration as a nuisance under the SR 152 alternatives, it is not likely that these impacts would reduce community interactions because of their intermittent nature. Social interactions could continue immediately after the passing of the train. While operations noise may affect the perception of the quality of life of residents in the community of Fairmead, it would not be anticipated to contribute to community disruption to such a degree that there would be an impact on community cohesion or division of the community would occur.

CEQA Conclusion

There would be no impact under CEQA because, although the Central Valley Wye alternatives would generate noise levels above existing ambient levels, there would be no physical division of an established community or reduce community cohesion related to operations noise. Therefore, CEQA does not require any mitigation.

Children's Health and Safety Impacts

Impact SO#18: Permanent Impacts on Children's Health and Safety

Five schools, a childcare facility, and a neighborhood park are all located within 700 feet of the Central Valley Wye alternatives. This section describes potential impacts on children's health and safety at these locations as a result of operations of the Central Valley Wye alternatives.

As discussed in Section 3.3, operation of the Central Valley Wye alternatives would result in a net reduction of criteria pollutant emissions relative to the CEQA existing conditions in 2015. Permanent, localized CO impacts would not occur because the Central Valley Wye alternatives do not include any stations or heavy maintenance facilities. The only vehicle trips associated with the Central Valley Wye alternatives include a small number of vehicle trips involved in maintenance of this portion of the HSR system. Accordingly, there would be no permanent exceedances of the California Ambient Air Quality Standards with respect to CO. Moreover, the Central Valley Wye alternatives are not considered to be a project of air quality concern and would not expose sensitive receptors, including children, to substantial concentrations of particulate matter during operations. Operations of the Central Valley Wye alternatives as part of the statewide HSR system would result in an overall benefit to air quality. This benefit would result from a shift in modes of travel from vehicles and aircrafts to HSR, which has fewer emissions relative to existing modes of transportation. The emissions reductions would be equal for all four Central Valley Wye alternatives. There would be an emissions benefit for GHG emissions as well. These long-term air quality improvements would provide a healthier environment for children.

Operations of any of the Central Valley Wye alternatives would generate noise levels above existing ambient levels on an intermittent basis and could adversely affect children. As discussed in Impact NV#5, Intermittent Permanent Exposure of Sensitive Receptors to Noise from HSR Operations, operations of the Central Valley Wye alternatives would have moderate and severe noise impacts on 79 to 96 single-family residences where children could live. The three SR 152 alternatives would result in the greatest number of moderate noise impacts during operations, and the Avenue 21 to Road 13 Wye Alternative would result in the greatest number of severe noise impacts during operations. Operations of the Central Valley Wye alternatives would not result in moderate or severe noise impacts on facilities where children congregate, such as schools, parks, and recreational facilities, or otherwise affect children's health and safety.

As discussed in Section 3.5, Washington Elementary School and El Capitan High School are both located within close proximity of the Site 7—Le Grand Junction/Sandy Mush Road, Warnerville—Wilson 230 kV Transmission Line under the SR 152 (North) to Road 19 Wye Alternative. Power and transmission lines are known to produce “extremely low frequency” EMFs, the effects of which decrease rapidly with distance. The closest sensitive receptor is Washington Elementary Schools, which is located approximately 300 feet west of the existing transmission line. Network upgrades consist of reconductoring of the existing power/transmission line with more efficient conductors, but would not result in a change in the line's voltage or bring the line closer to the school buildings. Because the strength of an electric field is based on voltage, risks associated with EMF exposure would be the same as existing conditions. Therefore, no new EMF exposure is anticipated as a result of operations of the Central Valley Wye alternatives.

As discussed in Section 3.10, there would be no impacts from hazardous materials and wastes to schools or recreational areas during operations of the Central Valley Wye alternatives. No hazardous materials would be required to operate the passenger rail service within the Central Valley Wye alternatives, and the Central Valley Wye alternatives would not include maintenance facilities that have the potential to generate hazardous wastes. As a result, hazardous materials and wastes activities would not occur within 0.25 mile of schools or recreational areas during operations. Moreover, none of the Central Valley Wye alternatives include at-grade crossings, so there would be no potential for accidents between trains and vehicles transporting hazardous materials. As such, operations of the Central Valley Wye alternatives would have no impacts on the health or safety of children.

As discussed in Section 3.11, the design of the Central Valley Wye alternatives incorporates effective measures to control trains and minimize safety risks. During final design, the contractor would perform preliminary hazards assessment and threat and vulnerability assessments that would be used to identify potential hazards and establish safety hazard minimization provisions. The impacts resulting from a potential derailment of a train are limited to the HSR right-of-way, thus limiting potential exposure to schools and children.

CEQA Conclusion

There is no specific requirement in California for an analysis of children's health impacts, separate from that of other individuals; however, there are requirements related to facilities where children congregate, particularly schools and parks.

Operations of the Central Valley Wye alternatives would result in less-than-significant impacts under CEQA for issues permanently affecting the health and safety of children. The Central Valley Wye alternatives would result in a reduction of criteria air pollutant emissions, no exceedances of the California Ambient Air Quality Standards with respect to CO, and no exposure to air pollutant concentrations of particulate matter. Exposure of children to EMF would not increase as a result of operations of the Central Valley Wye alternatives. No hazardous materials would be required to operate the passenger rail service within the Central Valley Wye alternatives and the Central Valley Wye alternatives would not include maintenance facilities that have the potential to generate hazardous wastes. Impacts from operations of the Central Valley Wye alternatives, on schools, parks, and children resulting from potential train derailment would be less than significant under CEQA because the design of the Central Valley Wye alternatives incorporates effective measures to contain the potential derailment of trains, thereby limiting the potential exposure of schools and children to train accidents during operations. Therefore, CEQA does not require any mitigation associated with air quality, EMF, hazardous materials and wastes, and safety and security impacts.

Operations of the Central Valley Wye alternatives would not subject facilities where children congregate to severe operations noise impacts. However, moderate and severe noise impacts would occur at multiple single-family residences where children could live. Mitigation measures (NV-MM#2: Additional Noise Analysis during Final Design, and NV-MM#3: Implement Proposed California High-Speed Rail Project Noise and Vibration Mitigation Guidelines) would lessen but not eliminate these impacts. Operations noise impacts under CEQA would be significant and unavoidable for all alternatives.

Economic Impacts

The following discussions address possible economic impacts from operations of the Central Valley Wye alternatives. Potential impacts from Central Valley Wye alternatives' operations include changes to employment, agricultural economy, and property and sales tax revenues.

Impact SO#19: Permanent Impacts on Regional Employment

The HSR project would improve state and regional connectivity while facilitating new access to employment and educational opportunities and creating job opportunities across many sectors of the regional economy. Overall, it is expected that employment growth would be a net benefit for the region as a whole. The Authority is committed to ensuring that no person in California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and Related Statutes.

It is estimated that approximately 4,800 new jobs could be created by 2040 in the San Joaquin Valley region. This total would include the direct jobs created to operate and maintain the HSR project (approximately 1,000 to 1,200 jobs); and the indirect and induced jobs created to support these new workers. An additional 35,400 jobs would be created in the three-county region (Merced, Madera, and Fresno Counties) as a result of additional jobs created as a result of the improved connectivity of the region to the rest of the state, leading to competitiveness of the region's industries and growth in the overall regional economy. The direct, indirect and induced operations-related employment, which would be the same for all Central Valley Wye alternatives, would be based out of stations, maintenance-of-infrastructure facilities, and the heavy maintenance facility, none of which are included in the Central Valley Wye alternatives and together, a maximum of up to 40,200 employees associated with the Central Valley Wye alternatives would be located in the RSA. The total operations-related employment increase of an estimated 40,200 would comprise slightly more than 6 percent of the 2040 employment forecast of 652,500. Overall, there would be no need to expand existing or add new community or

government facilities to maintain acceptable service ratios, response times, or other performance objectives for any public services, including fire protection, police protection, schools, parks, or other public facilities. For more information about employment operation impacts, see Overall Operations Effects on Regional Growth in Section 3.18.6.3, Central Valley Wye Alternatives.

CEQA Conclusion

There would be no impact under CEQA. The Central Valley Wye alternatives would not require an expansion of government services or facilities in response to changes in employment. Therefore, CEQA does not require any mitigation.

Impact SO#20: Permanent Impacts on Agricultural Economy

Noise generated by HSR can potentially have permanent impacts on confined animal agriculture and grazing animals. The HSR could increase stress on grazing livestock by subjecting it to uncomfortable noise and vibration levels; if such stresses were sufficiently intensive and extensive, they could reduce the operation's efficiency enough to cause indirect farmland conversion and affect the economic viability of such operations. A discussion of potential wind-induced impacts on agricultural operations is provided in Section 3.14.6.3, Central Valley Wye Alternatives, under Impact AG#7, Wind-Induced Effects.

Confined Animal Agriculture

Using existing research, the FRA established a threshold for HSR noise impacts on livestock of 100 dBA SEL (FRA 2005). As discussed in Section 3.4, SEL describes the noise from a single event such as a train passing a given point. The SEL for Central Valley Wye alternatives' operations would not exceed 100 dBA SEL at a distance greater than 100 feet from the track, which would be below the levels determined by research to reduce milk production. As shown in Table 3.12-15, portions of 5 to 12 dairies would be within 100 feet of the tracks, depending on the alternative, and thus could be exposed to HSR noise impacts if these confined animal facilities were to remain in place. However, following the HSR acquisition process, no confined animal facilities would operate within 100 feet of the tracks, and therefore no confined livestock would be subject to noise levels exceeding 100 dBA SEL under any of the Central Valley Wye alternatives. Therefore, operational noise would be below the levels determined by research to reduce milk production at all remaining operational confined animal facilities for each Central Valley Wye alternative and impacts on the agricultural economy as a whole would not be anticipated.

A high-speed train operating at 220 miles per hour would generate vibration levels estimated at 75 VdB at a distance of 70 feet from the tracks (see Section 3.4). The FRA applies this vibration standard to institutional land uses. However, no confined animal facilities would be located within 70 feet of the proposed tracks.

Grazing Animals

Previous scientific studies regarding impacts on grazing cattle from noise found that certain noise, such as the sound of a truck horn, increased the heart rates of free-ranging cattle, while cattle habituated to the sounds and sights of cars and trucks would readily graze along highways and seldom react. Loud noises have provoked retreat, freezing, or strong startle response in livestock (Mancini et al. 1988). The screening distance (i.e., distance from trackway centerline within which a significant impact could result) for a single-train pass-by SEL of 100 dBA would be approximately 100 feet from the track centerline (see Section 3.4). The amount of Grazing Land within 100 feet of the track centerline would vary by alternative (Table 3.12-19). Approximately 5–17 acres of Grazing Lands would be within 100 feet of the track centerline depending on the alternative. The SR 152 alternatives have the potential to affect the greatest acreage of grazing land caused by operations noise (16 to 17 acres, depending upon alternative), while the Avenue 21 to Road 13 Wye Alternative has the potential to affect 5 acres of grazing lands. However, the occurrence of Grazing Land adjacent to the trackway does not mean grazing animals would be affected by HSR noise. In most cases, livestock could avoid noise stress by walking away from the trackway as a train approaches; this option would be unavailable only where Grazing Land is enclosed by fencing less than 100 feet from the trackway, a circumstance that is unlikely to occur under the Central Valley Wye alternatives.

Table 3.12-19 Grazing Land Affected by Noise and Vibration under Each Central Valley Wye Alternative

Alternative	Area Affected by Noise and Vibration (acres) ¹
SR 152 (North) to Road 13 Wye	17
SR 152 (North) to Road 19 Wye	16
Avenue 21 to Road 13 Wye	5
SR 152 (North) to Road 11 Wye	17

Source: DOC, 2012, 2015

¹ Acreages are rounded to the nearest whole number.

The Central Valley Wye alternatives would result in vibration levels of approximately 75 VdB at a distance of 70 feet from the tracks (Authority 2012b). The Authority has determined that vibration impacts on dairy cattle may warrant mitigation at distances less than 100 feet from the path of the HSR (Authority 2012b). Approximately 5–17 acres of Grazing Lands would be within 100 feet of the track centerline depending on the alternative. Similar to the analysis for noise, the occurrence of Grazing Land adjacent to the trackway does not mean grazing animals would be affected by HSR vibration because livestock could avoid vibration stress. This option would be unavailable only where Grazing Land is enclosed by fencing less than 100 feet from the trackway, which as described above, is unlikely under any of the Central Valley Wye alternatives.

Losses in farm productivity from these impacts would be considered an economic impact. To the extent that productivity would be impaired within this zone, the impact could be alleviated by providing the farmer with financial compensation. In most cases, appropriate compensation would be settled during the right-of-way acquisition process. As part of SO-IAMF#2, the Authority would assist property owners with the filing of appropriate claims to receive compensation for economic losses in farm productivity. In addition, owners who believe they have suffered a loss of property value as a result of the Central Valley Wye alternatives may file a claim with the State of California’s Government Claims Board. It should be noted that many of the affected areas are located along existing roadway and railroad rights-of-way. The economic impact of operations noise impacts on confined animal agriculture would be minimized with SO-IAMF#2.

The potentially affected area of Grazing Land is small, in most cases there would be no noise or vibration impact on livestock even in the potentially affected area, and the impact from noise or vibration disturbance would not preclude agricultural use and would not result in the conversion of Important Farmland. For areas where the Central Valley Wye alternatives have the potential to expose animals grazing within 100 feet of the trackway to elevated noise and vibration levels, financial compensation would be provided to mitigate such impacts. With financial compensation, no impacts on the agricultural economy are anticipated. Remaining grazing land would continue to operate as they do now.

In accordance with NEPA, this analysis discusses impacts on the agricultural economy that could result from construction of the Central Valley Wye alternatives. In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Impact SO#21: Permanent Impacts on County and City Property Tax Revenues from Changes in Property Values

Property value increases may occur within the San Joaquin Valley from HSR operations, which could increase the connectivity of the region to the rest of the state. Property value increases could result on a countywide level in Merced and Madera Counties and in the city of Madera from the new access to HSR travel acting as a catalyst for new development near stations. However, this would not necessarily be true of property adjoining the Central Valley Wye alternatives because this section would not include any stations.

The value of properties immediately adjacent to the Central Valley Wye alternatives may decrease as a result of visual or noise disturbances. The Central Valley Wye alternatives are primarily adjacent to transportation corridors, and many of the impacts that are associated with these transportation corridors that affect property values, such as visual and noise impacts, already occur and would continue to occur. To the extent the Central Valley Wye alternatives would result in new grade separations or elevated tracks, it could have greater visual impacts than currently exist along these transportation corridors.

Proximity impacts on property values would be reduced but not avoided by the visual and noise mitigations being proposed (AVR-MM#3 through AVR-MM#6 and NV-MM#3, which are described in Section 3.16 and Section 3.4). In addition, such impacts would be limited to a small geographic area compared to expected region-wide increases in property values. These resulting overall changes in property values cannot be quantified. Many factors influence these values, and it is not possible to isolate the impact of the Central Valley Wye alternatives from all other current and future impacts on real estate supply and demand. Similar to the loss of property tax revenue from acquisitions for the Central Valley Wye alternatives, the loss of property tax revenue from changes in adjacent property values is expected to represent a small percentage of the total property tax revenues collected by the counties.

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

Impact SO#22: Permanent Impacts on Sales Tax Revenues

Operation and maintenance of the Central Valley Wye alternatives would require local expenditures on materials, such as gasoline, oil, paint, parts, and lightbulbs. These expenditures would result in local annual sales tax revenue gains estimated at \$163,000 to \$189,000 (Authority and FRA 2016a, 2016d). The SR 152 (North) to Road 19 Wye Alternative would generate the greatest amount of new sales tax revenues (\$189,000), followed by the SR 152 (North) to Road 13 Wye Alternative (\$173,000) and the Avenue 21 to Road 13 Wye Alternative (\$169,000). The SR 152 (North) to Road 11 Wye Alternative would generate the least amount of new sales tax revenue (\$163,000).

In accordance with Section 15064(e) of the CEQA Guidelines, “economic and social changes resulting from a project shall not be treated as significant effects on the environment.” Therefore, no CEQA conclusions are made related to economic impacts.

3.12.7 Mitigation Measures

This section presents updated mitigation to address socioeconomic and community impacts that is general consistent with the mitigation required under the Merced to Fresno Final EIR/EIS. The following mitigation measures would be implemented to reduce impacts on community cohesion.

SO-MM#1: Implement Measures to Reduce Impacts Associated with the Division of Residential Neighborhoods.

Prior to construction (in residential areas) the Authority would minimize impacts associated with the Preferred Alternative in residential areas by conducting special outreach to affected homeowners and residents to fully understand their special relocation needs. The Authority would make efforts to locate suitable replacement properties that are comparable to those currently occupied by these residents, including constructing suitable replacement facilities if necessary.

In cases where residents wish to remain in the immediate vicinity, the Authority would take measures to purchase vacant land or buildings in the area, and consult with local authorities over matters such as zoning, permits, and moving of homes and replacement of services and utilities, as appropriate. Before land acquisition, the Authority would conduct community workshops to obtain input from those homeowners whose property would not be acquired, but whose community would be substantially altered by construction of HSR facilities, including the loss of many neighbors, to identify measures that could be taken to mitigate impacts on those who

remain (including potential uses for remnant parcels that could benefit the community in the long term). The Authority would document implementation of this measure through annual reporting.

This mitigation measure is anticipated to be effective because it would provide the Authority with detailed understanding of the differing relocation needs for individual displaced residences and with the community connections between these residents. With application of this mitigation measure, the Authority would assist these displaced residents with finding new suitable housing within the communities they currently reside in, if desired, and would work with them through community workshops to support long-term neighborhood cohesion. This mitigation measure is related to outreach and coordination and does not require ground-disturbing activities that would result in secondary environmental impacts.

SO-MM#2: Implement Measures to Reduce Impacts Associated with the Division of Communities.

The Authority, in consultation with the community of Fairmead, would incorporate the following features (depicted on Figure 3.12-3) into the final design of the Preferred Alternative to maintain a robust sense of community cohesion in Fairmead:

- Two vehicular crossings, one each at Road 18 3/4 and Road 20
- A multiuse trail along Road 19 1/2 between Avenue 24 and Avenue 22 3/4 to maintain pedestrian and bicycle access between the northern and southern portions of Fairmead (1.25 miles)
- Sidewalk installation at Avenue 23 (0.75 mile) and Arnott Drive (0.15 mile), and roadway repairs and sidewalk installations at Avenue 22 3/4 (0.5 mile), Moore Street (0.15 mile), Yates Avenue (0.33 mile), Road 19 1/2 (0.25 mile), Elm Street (0.33 mile), Fairmead Circle (0.12 mile), and Hickory Street (0.25 mile)
- Grading of Sycamore Street between Avenue 22 1/2 and Avenue 22 3/4 (0.25 mile)
- Roadway improvements, sidewalk installations, and landscaping at Fairmead Boulevard (1.65 miles), Sinclair Drive (0.2 mile), and Maple Street (0.4 mile)
- Street repair, sidewalk installation, and stormwater management at Avenue 22 1/2 (0.75 mile)
- Installation of streetlights at the Avenue 22 1/2 bus stop
- Landscaping along the HSR corridor (1.75 miles)

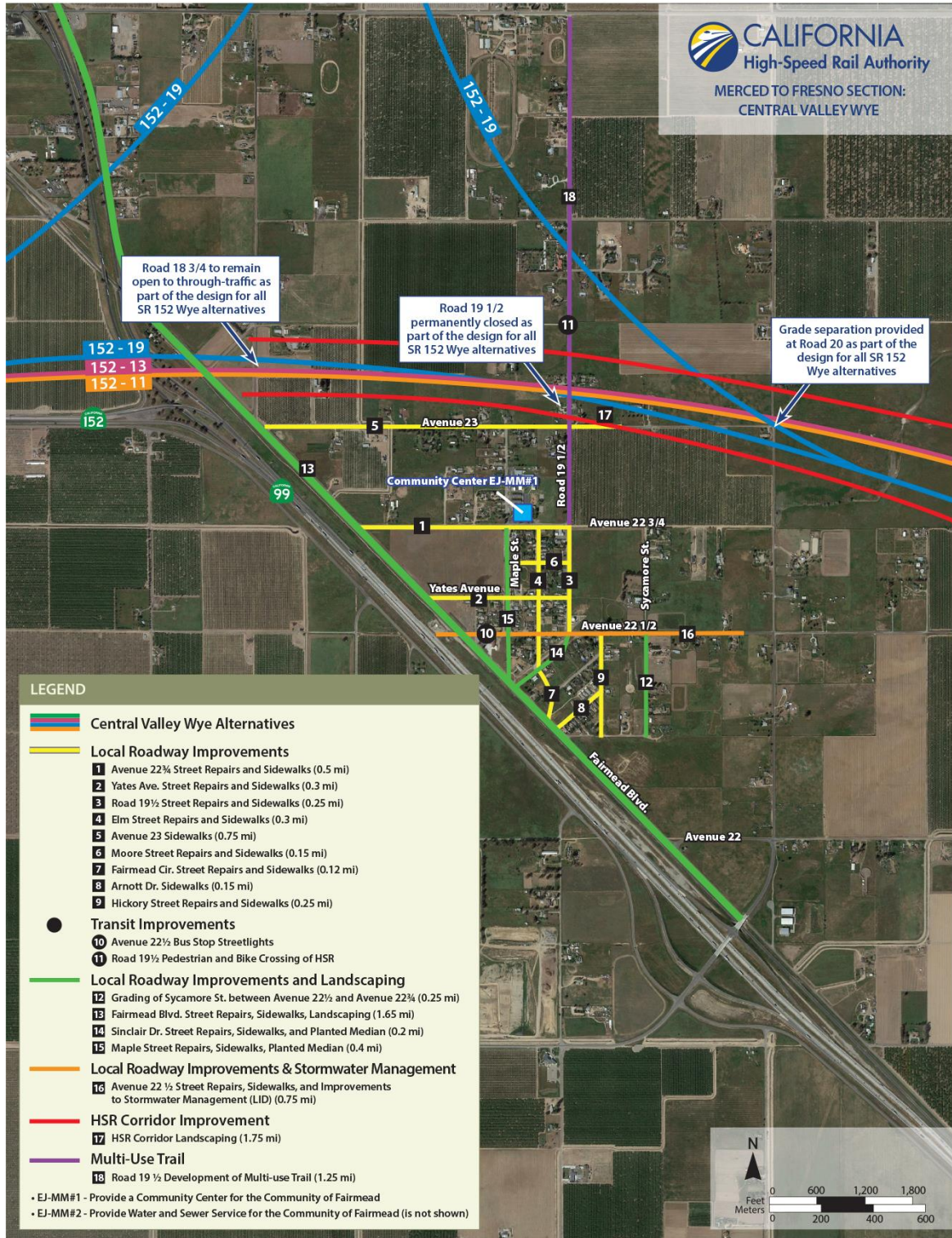
In addition, prior to construction the Authority would minimize impacts associated with the Preferred Alternative in the existing established communities through a program of outreach to homeowners, residents, business owners, and community organizations in affected neighborhoods. The objective would be to maintain community cohesion and avoid physical deterioration. The Authority would also conduct community workshops about the future use of the area beneath the rail guideway, where these exist. These meetings would provide residents and business owners with the opportunity to identify design and use options that could strengthen community cohesion and be compatible with the existing community character.

The Authority would present information at the workshops, giving the community options for areas along the right-of-way or beneath the rail guideway, and providing an opportunity for individuals to provide feedback. For example, if safety considerations prohibit such uses as bike paths or community gardens, alternatives, such as sculpture gardens or managed landscaping, could be considered. As part of the Central Valley Wye alternatives planning and development, the Authority has already initiated workshops in the community of Fairmead and received feedback from community members.

The Authority would be responsible for interpreting the results of the community workshops and incorporating appropriate features into the design of the Central Valley Wye alternatives and measures that address the long-term management of the areas along the right-of-way or beneath the elevated rail guideway. This would involve documenting the desired design concepts,

incorporating them into the final design, and facilitating ongoing maintenance. The Authority would identify potential uses that may be developed in the right-of-way of the HSR system. These uses would be compatible with the character of the adjacent community and sensitive to their needs. The costs associated with the development of these corridor improvements and how these costs would be paid would be determined during consultations with the affected city, county, parks district, or other community organizations. Furthermore, the parties or entities (i.e., the Authority, local government, park or recreation district, or nonprofit organization) responsible for some ongoing maintenance of these community areas would be determined. The Authority would document compliance with this measure through annual reporting.

This mitigation measure is anticipated to be effective because it would include robust community outreach to obtain input from a large number of community members to provide input on the Central Valley Wye alternatives design within their community. Further, this would be a collaborative effort with local communities that would facilitate community conversations on land uses that would be compatible with community desires and needs and visually appealing, thereby helping to strengthen community cohesion. This mitigation measure would require some ground-disturbing activities such as roadway improvements consisting of resurfacing, installation of local stormwater management facilities, new sidewalks, streetlighting, and landscaping. Construction activities would occur within existing, previously disturbed transportation rights-of-way, and would not affect environmentally sensitive areas. Construction activities would be similar to, but less intensive in scope and scale in relationship to those that are described for construction of the HSR embankment east of SR 99 and north of Avenue 23, and IAMFs would avoid or minimize construction-related noise, transportation, and air quality impacts. Because these activities would occur in previously disturbed areas in close proximity to other construction activities associated with these alternatives and they are generally less intensive in scope and scale than those already described for construction of the three SR 152 wye alternatives, they are not anticipated to result in secondary impacts requiring additional mitigation.



Source: ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

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Figure 3.12-3 Potential Community Improvements to Fairmead

3.12.8 Impacts Summary for NEPA Comparison of Alternatives

This section summarizes the impacts of the Central Valley Wye alternatives and compares them to the anticipated impacts of the No Project Alternative. Table 3.12-20 provides a comparison of the potential impacts of each of the Central Valley Wye alternatives, summarizing the more detailed information presented in Section 3.12.6. A comparison of the impacts on socioeconomics and communities of the different Central Valley Wye alternatives follows Table 3.12-20.

As discussed in Chapter 2, under the No Project Alternative, development pressures resulting from an increasing population in Merced and Madera Counties would continue to lead to associated direct and indirect impacts on socioeconomics and communities. The No Project Alternative is anticipated to result in a continuation of recent development trends that have led to a permanent conversion of Important Farmland to nonagricultural use. Development under the No Project Alternative would result in similar types of impacts on socioeconomics and communities as the Central Valley Wye alternatives. Planned residential, commercial, industrial, recreational, transportation, and agricultural projects would lead to impacts on socioeconomics and communities from temporary construction activities, permanent conversion of Important Farmland to nonagricultural use, and displacements of residential, commercial, and industrial properties.

The Merced to Fresno Final EIR/EIS concluded that development of the HSR system would result in potential impacts on socioeconomics and communities. Implementing the Central Valley Wye alternatives could also result in impacts on socioeconomics and communities through activities and infrastructure development that may disrupt or divide communities, potentially affect children’s health and safety, and result in displacements or affect the use of residential and commercial properties, agricultural operations, and community facilities. Operations of the Central Valley Wye alternatives could affect socioeconomics and communities through inspection and maintenance activities that could result in the disruption of communities, potential impacts on children’s health and safety, and changes in employment and property and sales tax revenues.

The Central Valley Wye alternatives would incorporate IAMFs to reduce impacts on socioeconomics and communities. These IAMFs would include transportation, noise, and air quality controls; context-sensitive design; and relocation assistance and benefits to displaced residents, businesses, and agricultural operations. The incorporation of IAMFs would minimize or avoid impacts of the Central Valley Wye alternatives on community displacements and relocations, and children’s health and safety.

Table 3.12-20 Comparison of Central Valley Wye Alternative Impacts

Resource Category	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Construction Impacts				
Disruption or Severance of Community Interactions or Division of Established Communities				
Impact SO#1: Temporary Impacts on Communities—Community Cohesion	Disruption to Fairmead and agricultural community caused by noise, visual quality, and transportation impacts.	Greatest disruption to Fairmead, as well as disruption to agricultural community, caused by noise, visual quality, and transportation impacts. Noise-related disruption in Waterford and Merced.	Disruption to agricultural community caused by noise, visual quality, and transportation impacts. Limited disruption to Fairmead.	Disruption to Fairmead and agricultural community caused by noise, visual quality, and transportation impacts.

Resource Category	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Impact SO#2: Permanent Impacts on Communities—Community Cohesion				
Community Division	Yes, division of Fairmead in the east-west direction and disruption of agricultural community	Yes, division of Fairmead in the east-west and southwest-northeast directions and disruption of agricultural community	No, no established communities divided	Yes, division of Fairmead in the east-west direction and disruption of agricultural community
Permanent Road Closures within Fairmead	2 road closures (Road 19 1/2 and Road 20 1/2) within Fairmead's residential core	2 road closures (Road 19 1/2 and Road 20 1/2) within Fairmead's residential core	1 road closures (Road 19 1/2) within southern Fairmead	2 road closures (Road 19 1/2 and Road 20 1/2) within Fairmead's residential core
Permanent Visual Changes in Fairmead	HSR extends through Fairmead on embankment, blocking residential views and degrading visual quality.	Two legs of the wye extend through Fairmead on embankment and structure, blocking residential views and resulting in the greatest degradation of visual quality	No impact	HSR extends through Fairmead on embankment, blocking residential views and degrading visual quality

Displacements and Relocations

Impact SO#3: Displacements and Relocations of Residences	Approximately 96 units displaced and 315 residents relocated	Approximately 119 units displaced and 391 residents relocated	Approximately 65 units displaced and 213 residents relocated	Approximately 62 units displaced and 224 residents relocated
Impact SO#4: Displacements and Relocations of Commercial and Industrial Businesses	Approximately 4 commercial and 4 industrial displacements	Approximately 4 commercial and 4 industrial displacements	Approximately 1 industrial displacement	Approximately 4 commercial and 3 industrial displacements
Impact SO#5: Displacements and Relocations of Agricultural Operations	Direct and indirect conversion of 2,385 acres Important Farmland, 21 displaced agricultural facilities, 5 relocated or reconfigured dairies	Direct and indirect conversion of 2,537 acres Important Farmland, 17 displaced agricultural facilities, and 2 relocated or reconfigured dairies	Direct and indirect conversion of 2,467 acres Important Farmland, 29 displaced agricultural facilities, and 4 relocated or reconfigured dairies	Direct and indirect conversion of 2,336 acres Important Farmland, 16 displaced agricultural facilities, and 2 relocated or reconfigured dairies.

Resource Category	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Impact SO#6: Displacements and Relocations of Community and Public Facilities	The Central Valley Wye alternatives would not displace or require the reconfiguration of any community or public facilities.			
Children's Health and Safety				
Impact SO#7: Temporary Impacts on Children's Health and Safety	Temporary minor delays, obstructions, and detours for school buses and pedestrian and bicycle routes used by children for all Central Valley Wye alternatives			
	Construction-related air quality effects would not exceed NAAQS standards			
	No construction noise impacts affecting children's health	No construction noise impacts affecting children's health	Daytime construction noise impacts at the Chowchilla Seventh-day Adventist School	No construction noise impacts affecting children's health
	Electromagnetic interference generated during construction of all four Central Valley Wye alternatives would not result in exposure of children to a documented health risk, and would not interfere with implanted medical devices.			
	Use of hazardous materials and asbestos-containing materials and lead-based paint could be encountered during demolition activities near Fairmead Elementary School and Fairmead Head Start	Use of hazardous materials and asbestos-containing materials and lead-based paint could be encountered during demolition activities near Fairmead Elementary School, Fairmead Head Start, Washington Elementary School, El Capitan High School, and the Richard Bernasconi Park	Use of hazardous materials and asbestos-containing materials and lead-based paint could be encountered during demolition activities near Alview Elementary School and Chowchilla Seventh-day Adventist School	Use of hazardous materials and asbestos-containing materials and lead-based paint could be encountered during demolition activities near Fairmead Elementary School and Fairmead Head Start
Impact SO#8: Permanent Impacts on Children's Health and Safety	For all Central Valley Wye alternatives, there would be beneficial transportation safety improvements for roadways and pedestrian and bicycle routes related to the installation of new grade separations.			
	Exposure of two sensitive receptors to increased traffic noise from realigned state and local roads	Exposure of two sensitive receptors to increased traffic noise from realigned state and local roads	No increased exposure to increased traffic noise from realigned state and local roads	Exposure of two sensitive receptors to increased traffic noise from realigned state and local roads

Resource Category	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Economic Impacts				
Impact SO#9: Temporary Impacts on Employment	8,610 jobs created	9,450 jobs created	8,470 jobs created	8,120 jobs created
Impact SO#10: Permanent Impacts on School District Funding from Student Relocations	Displacement of 96 residences. Sufficient relocation resources available within affected school districts.	Displacement of 119 residences. Sufficient relocation resources available within affected school districts.	Displacement of 65 residences. Insufficient relocation resources available within the Alview-Dairyland Elementary School District.	Displacement of 62 residences. Sufficient relocation resources available within affected school districts.
Impact SO#11: Permanent Impacts on School District Funding from Reduced Property Tax Revenues	\$798,300, or 0.3 percent total fiscal year 2013/2014 revenue decrease	\$906,200, or 0.3 percent total fiscal year 2013/2014 revenue decrease	\$688,800, or 0.2 percent total fiscal year 2013/2014 revenue decrease	\$702,900, or 0.3 percent total fiscal year 2013/2014 revenue decrease
Impact SO#12: Permanent Impacts on School Bus Transportation	38 road closures; 24 roadways crossings or undercrossings; maximum of 3.1 miles out-of-direction travel	36 road closures; 29 roadways crossings or undercrossings; maximum of 3.1 miles out-of-direction travel	39 road closures; 28 roadways crossings or undercrossings; maximum of 3.1 miles out-of-direction travel	33 road closures; 24 roadways crossings or undercrossings; maximum of 3.1 miles out-of-direction travel
Impact SO#13: Temporary Impacts on Agricultural Economy—Noise and Vibration	9 dairies	5 dairies	12 dairies	5 dairies
Impact SO#14: Permanent Impacts on Agricultural Economy	\$8.4 million estimated revenue loss, and 80 estimated jobs lost	\$8.6 million estimated revenue loss, and 86 estimated jobs lost	\$7.6 million estimated revenue loss and 79 estimated jobs lost	\$7.9 million estimated revenue loss, and 77 estimated jobs lost.
	245 acres of Williamson Act and 180 acres FSZ remnant parcels below county thresholds	203 acres of Williamson Act and 184 acres of FSZ remnant parcels below county thresholds	94 acres of Williamson Act and 136 acres of FSZ remnant parcels below county thresholds	155 acres of Williamson Act and 155 acres of FSZ remnant parcels below county thresholds
Impact SO#15: Permanent Impacts on County and City Property Tax Revenues from Property Acquisition	\$798,300, or 0.3 percent total fiscal year 2013/2014 revenue decrease	\$906,200, or 0.3 percent total fiscal year 2013/2014 revenue decrease	\$688,800, or 0.2 percent total fiscal year 2013/2014 revenue decrease	\$702,900, or 0.3 percent total fiscal year 2013/2014 revenue decrease
Impact SO#16: Temporary Impacts on Sales Tax Revenues	\$4.89 million in additional tax revenue estimated	\$5.37 million in additional tax revenue estimated	\$4.80 million in additional tax revenue estimated	\$4.61 million in additional tax revenue estimated

Resource Category	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Operations Impacts				
Disruption or Severance of Community Interactions or Division of Established Communities				
Impact SO#17: Permanent Noise Impacts on Community Cohesion	92 severe and moderate noise impacts	81 severe and moderate noise impacts	79 severe and moderate noise impacts	96 severe and moderate noise impacts
Children's Health and Safety				
Impact SO#18: Permanent Impacts on Children's Health and Safety	All Central Valley Wye alternatives would result in an overall benefit to air quality as the rest of transportation modes shifts.			
	Greatest number of moderate noise impacts, second least number of severe noise impacts	Second fewest moderate noise impacts, least severe noise impacts	Fewest moderate noise impacts, greatest severe noise impacts	Second greatest moderate noise impacts, second greatest severe noise impacts
	No increased risks associated with EMF exposure.			
	There would be no use of hazardous materials or generation of hazardous wastes close to schools or recreation areas.			
Economic Impacts				
Impact SO#19: Permanent Impacts on Regional Employment	All Central Valley Wye alternatives would result in the creation of approximately 4,800 new jobs.			
Impact SO#20: Permanent Impacts on Agricultural Economy – Noise and Vibration	17 acres of grazing land potentially affected	16 acres of grazing land potentially affected	5 acres of grazing land potentially affected	17 acres of grazing land potentially affected
Impact SO#21: Permanent Impacts on County and City Property Tax Revenues from Changes in Property Values	Yes	Yes	Yes	Yes
Impact SO#22: Permanent Impacts on Sales Tax Revenues	Estimated \$173,000 annually in direct new sales tax revenues	Estimated \$189,000 annually in direct new sales tax revenues	Estimated \$169,000 annually in direct new sales tax revenues	Estimated \$163,000 annually in direct new sales tax revenues

Source: Authority and FRA, 2018

CEQA = California Environmental Quality Act

HSR = high-speed rail

EMF = electromagnetic fields

SR = State Route

NAAQS = National Ambient Air Quality Standards

CAAQS = California Ambient Air Quality Standards

SFVAPCD = San Joaquin Valley Unified Air Pollution Control District

FSZ = Farmland Security Zone

3.12.8.1 Construction Impacts

Disruption or Severance of Community Interactions or Division of Established Communities

Construction of any of the SR 152 alternatives would have localized temporary impacts on noise, visual quality, and transportation, which could in turn have implications on community cohesion and social engagement in Fairmead and the rural agricultural community. Construction equipment and activities would generate increases in noise that would result in human annoyance, visual changes that would result in a degradation of visual quality, and temporary road closures that could disrupt pedestrian, bicycle, and transit circulation patterns and inconvenience residents and businesses. Construction activities, which would occur over 1 to 3 years at any given location, would introduce a visible and functional barrier that could potentially deter neighbors from interacting and participating in community activities, and could result in a perception by area residents that they have been separated from their community. These temporary construction-related noise, visual quality, and transportation impacts would be greatest under the SR 152 (North) to Road 19 Wye Alternative, followed by the SR 152 (North) to Road 13 Wye Alternative and SR 152 (North) to Road 11 Wye Alternative. The Avenue 21 to Road 13 Wye Alternative, because of its alignment along the southern edge of Fairmead in a predominately rural area, would have the least effect on Fairmead residents and community character and cohesion.

Construction of the Central Valley Wye alternatives would also result in permanent impacts on community cohesion by disrupting the rural agricultural community along the length of the alignment, and dividing the community of Fairmead under the SR 152 alternatives. The three SR 152 alternatives would travel through Fairmead on an embankment, introducing a new linear feature that extends through the community, degrading visual quality and blocking residential views. The SR 152 alternatives would affect community cohesion because, while some roads would be grade separated and remain open to travel across the HSR system, others would be closed and would therefore impede travel between residences in the northern part of the community and the residences and community facilities (e.g., Fairmead Elementary School) to the south. The introduction of the permanent transportation feature of the HSR system into the community of Fairmead, along with impediments to travel between parts of the community, and the number of residential displacements in the community could affect perceptions of quality of life, social relationships, and community character and cohesion within Fairmead. The SR 152 (North) to Road 19 Wye Alternative would have the greatest impact to the community character and cohesion of Fairmead because of the greater length of alignment that would bisect the community and displace more residences that, owing to the limited available replacement properties within the community, may be unable to relocate within Fairmead. The SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 11 Wye Alternatives would have similar types of impacts, but of lesser magnitude than the impacts that would occur under the SR 152 (North) to Road 19 Wye Alternative. The Avenue 21 to Road 13 Wye Alternative would have some impacts on individuals within the southern portion of Fairmead, but its alignment south of the population center would avoid these community cohesion impacts.

Displacements and Relocations

Construction of the Central Valley Wye alternatives would require the acquisition of right-of-way and would result in the displacement of residents, commercial and industrial businesses, and agricultural operations. No displacement of community or public facilities would occur under any of the Central Valley Wye alternatives. The most residential displacements (119 residences) would occur under the SR 152 (North) to Road 19 Wye Alternative and would be concentrated in Fairmead, displacing 10.5 percent of the community's residences. The fewest residential displacements would occur under the SR 152 (North) to Road 11 Wye and Avenue 21 to Road 13 Wye Alternative (62 and 65 residences, respectively). Although there are a sufficient number of comparable relocation properties available in the relocation RSA as a whole, there are insufficient residential properties within the community of Fairmead under the SR 152 alternatives and within unincorporated Madera County under all Central Valley Wye alternatives to accommodate all the residents displaced under the SR 152 alternatives within the same community. The most

commercial and industrial business displacements would occur under the SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 19 Wye Alternatives (8 business displacements each), and the SR 152 (North) to Road 11 Wye Alternative (7 business displacements), and would affect businesses along SR 152. The Avenue 21 to Road 13 Wye Alternative would have the fewest business displacements (1 business displacement). It is anticipated that there are sufficient available commercial and industrial properties available for rent or for sale to accommodate these displacements within the relocation RSA. Agricultural operations would be affected by the acquisition and permanent conversion of farmland to nonagricultural uses, the displacement of agricultural facilities, and the relocation or reconfiguration of dairies. The Avenue 21 to Road 13 Wye Alternative would displace the most agricultural facilities, while the SR 152 (North) to Road 13 Wye Alternative would require reconfiguration or relocation of the most dairies. While it is anticipated that there are likely sufficient available agricultural properties within the relocation RSA to relocate displaced agricultural facilities, it should be noted that the relocation and reconfiguration of agricultural facilities would disrupt operations, reducing productivity, and could require time-consuming processes to obtain approvals and permits. The Authority would comply with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (SO-IAMF#2) and develop a relocation mitigation plan (SO-IAMF#3) to minimize the impacts of displacements and relocations on residents and businesses, and would incorporate measures to minimize impacts on agricultural operations and the amount of land affected by HSR construction (AG-IAMF#2 and AG-IAMF#3).

Children's Health and Safety

Temporary construction activities and permanent construction impacts have the potential to affect children's health and safety. Design features of the Central Valley Wye alternatives would avoid or minimize temporary transportation-related impacts that could affect the safety of children traveling to school and minimize the potential exposure of children to construction site safety hazards. Grade separations and improvement to pedestrian facilities would result in a permanent improvement in safety for children. Construction-related air quality emissions would not exceed NAAQS standards. Construction noise would affect the Chowchilla Seventh-day Adventist School; however, the implementation of NV-MM#1 would minimize the effects. Two residential sensitive receptors would be exposed to permanent increases in traffic noise as a result of realigned state and local roads from construction of any of the three SR 152 alternatives. Electromagnetic interference generated during construction of all four Central Valley Wye alternatives would not result in a documented health risk and would not interfere with implanted medical devices. The potential for accidental spills or releases of hazardous materials and wastes near schools during construction would have the potential to affect Fairmead Elementary School and Fairmead Head Start under the SR 152 alternatives, and Alview Elementary School and Chowchilla Seventh-Day Adventist School under the Avenue 21 to Road 13 Wye Alternative. The implementation of mitigation measure HMW-MM#1 would reduce the potential for a severe spill by limiting the use of extremely hazardous substances or mixtures thereof in a quantity equal to or greater than the state threshold quantity within 0.25 mile of a school. Construction of the Central Valley Wye alternatives would also result in permanent transportation safety benefits to vehicular traffic, including school buses, pedestrians, and bicycles caused by the implementation of grade separations that would provide new crossings over existing transportation corridors and remove existing at-grade crossings with railroads.

Economic Impacts

Construction of the Central Valley Wye alternatives would create an additional 8,120 to 9,450 direct, indirect, and induced annual jobs within Merced, Madera, and Fresno Counties. Construction of the SR 152 (North) to Road 19 Wye Alternative would generate the most jobs (9,450), while construction of the SR 152 (North) to Road 11 Wye Alternative would generate the fewest jobs (8,120). The demand for workers related to construction of the Central Valley Wye alternatives would be a benefit to employment in the economic impact RSA under all of the Central Valley Wye alternatives, but to the highest degree under the SR 152 (North) to Road 19 Wye Alternative and the least degree under the SR 152 (North) to Road 11 Wye Alternative. The region's construction labor force is anticipated to meet the demand for construction workers with

the majority of construction labor force anticipated to be residents of Madera, Merced, or Fresno County who would drive or carpool to active construction sites and return home at the end of the day. The small cities and towns near to the corridor are not expected to experience an influx of new residents associated with construction of the Central Valley Wye alternatives.

Construction of the Central Valley Wye alternatives would affect school district funding through the displacement and relocation of school-aged residents outside of the school district, and through the acquisition of private property that generates property taxes, both of which affect school districts. Construction of the Central Valley Wye alternatives would displace from 62 to 119 residences, affecting from 45 to 85 school-aged residents. The SR 152 (North) to Road 19 Wye Alternative would displace the most school-aged residents, while the SR 152 (North) to Road 11 Wye Alternative would displace the fewest school-aged residents. It is anticipated that there would be sufficient residential relocation resources for displaced residents to relocate within the same school districts for the SR 152 (North) to Road 13 Wye Alternative, SR 152 (North) to Road 19 Wye Alternative, and SR 152 (North) to Road 11 Wye Alternative. As a result, under these alternatives, there would be little to no effect on school district funding as a result of student relocations. However, residential displacements within the Alview-Dairyland Union Elementary School District under the Avenue 21 to Road 13 Wye Alternative may be unable to relocate within the district. The relocation of students outside of the Alview-Dairyland Union Elementary School District would result in a revenue loss for the district. In addition, the acquisition of private property for construction of the Central Valley Wye alternatives would result in reductions in property tax revenues of from \$702,900 to \$906,200 annually for Merced and Madera Counties (accounting for 0.2 to 0.3 percent of the total property tax revenue of these counties). The SR 152 (North) to Road 19 Wye Alternative would result in the greatest reduction of property tax revenue, while the Avenue 21 to Road 13 Wye Alternative would result in the smallest reduction of property tax revenue. While the overall impact on school district funding would be slight, within the current context of challenging budget deficits for county and city jurisdictions, any reduction to school district funding would be of consequence.

Construction of the Central Valley Wye alternatives would result in roadway modifications that could affect routing of school buses caused by road closures, and the distribution of roadway overcrossings and undercrossings. The SR 152 (North) to Road 13 Wye Alternative would have the most permanent road closures and new roadway overcrossings. The Avenue 21 to Road 13 Wye Alternative would have the fewest permanent road closures, and the SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 11 Wye Alternatives would have the fewest roadway overcrossings and undercrossings. The maximum amount of out-of-direction travel for school buses would be 3.1 miles under any of the Central Valley Wye alternatives. This represents an approximate 10 percent increase in travel distance when compared to the total average roundtrip mileage (25–35 miles) of the bus routes, and would result in increased fuel costs for school districts. The increased fuel costs would be comparable under all four Central Valley Wye alternatives.

Construction of the Central Valley Wye alternatives would generate noise and vibration from construction equipment and vehicles that could affect dairies within 100 feet of the Central Valley Wye alternatives' project footprints. The Avenue 21 to Road 13 Wye Alternative would expose the most dairies to construction noise impacts, while the SR 152 (North) to Road 19 Wye Alternative and SR 152 (North) to Road 11 Wye Alternative would expose the fewest dairies to construction noise impacts. As construction noise would not exceed the levels determined by research to reduce milk production, impacts on these confined animal facilities, loss of milk production, and the agricultural economy as a whole are not anticipated for any of the Central Valley Wye alternatives.

Construction of the Central Valley Wye alternatives would require the acquisition and permanent conversion of agricultural lands and confined animal agricultural facilities and could affect agricultural operations. The loss of agricultural land could result in a reduction of employment opportunities for farm workers and a reduction in overall agricultural economic revenues. The estimated job loss associated with the amount and type of agricultural lands conversion for construction of the Central Valley Wye alternatives is from 77 jobs under the SR 152 (North) to

Road 11 Wye Alternative to 86 jobs under the SR 152 (North) to Road 19 Wye Alternative. The estimated annual revenue reductions because of conversion of agricultural lands would be from \$7.6 million to \$8.6 million. The greatest amount of revenue loss would occur under the SR 152 (North) to Road 19 Wye Alternative, while the least amount of revenue loss would occur under the Avenue 21 to Road 13 Wye Alternative. This revenue loss represents less than 0.1 percent of the region's estimated \$4.8 billion annual agricultural production, a very small amount of the total annual revenue generated by agricultural production within Merced and Madera Counties (CDFA 2012). Additionally, partial acquisitions of agricultural lands could result in the creation of remnant parcels that would no longer qualify for Williamson Act or FSZ contracts. This would occur to the greatest extent under the SR 152 (North) to Road 13 Wye Alternative and SR 152 (North) to Road 19 Wye Alternative, and to the least extent under the Avenue 21 to Road 13 Wye Alternative. While the change in a parcel's tax status may affect agricultural profitability by resulting in a greater tax burden for landowners, it is not anticipated to result in the conversion of these lands to nonagricultural uses related to the high value and productivity of farmland in the Central Valley.

Construction of the Central Valley Wye alternatives could result in permanent impacts on county and city property tax revenues caused by the removal of acquired properties from the tax rolls. The greatest decline in government revenue would occur under the SR 152 (North) to Road 19 Wye Alternative, which would remove approximately \$906,200 of assessed property value from county tax rolls, and the least impact on government revenue would occur under the Avenue 21 to Road 13 Wye Alternative. This revenue decline would be likely be offset by the short-term generation of new revenue related to sales taxes on local construction spending. The impact associated with sales tax revenue would be greatest under the SR 152 (North) to Road 19 Wye Alternative (\$5.47 million in generated revenue) and least under the SR 152 (North) to Road 13 Wye Alternative (\$4.61 million).

3.12.8.2 Operations Impacts

Disruption or Severance of Community Interactions or Division of Established Communities

Operation of the Central Valley Wye alternatives would introduce a new source of noise, and would result in moderate and severe noise impacts that would be reduced but not avoided with the implementation of noise mitigation measures. Operations noise impacts would be concentrated in Fairmead under the SR 152 alternatives, and the most severe or moderate impacts would occur under SR 152 (North) to Road 11 Wye Alternative. The Avenue 21 to Road 13 Wye Alternative would have the fewest impacts on Fairmead, and the fewest severe or moderate noise impacts. While operations noise would be perceived as a nuisance, its intermittent nature would not result in a permanent reduction in community interactions or affect overall community cohesion of Fairmead.

Children's Health and Safety

The Central Valley Wye alternatives, as part of the statewide HSR system, would result in long-term air quality improvements that would provide a healthier environmental for children. These benefits would be equal all four Central Valley Wye alternatives. Operations of the Central Valley Wye alternatives would not subject facilities where children congregate to severe operations noise impacts or otherwise affect children's health and safety; however, children living at single-family residential sensitive receptors could be exposed to moderate and severe noise impacts during operations of all of the Central Valley Wye alternatives if they are present. There would be no increased risks to children's health from EMF as a result of the network improvements to the Site 7—Le Grand Junction/Sandy Mush Road, Warnerville—Wilson 230 kV Transmission Line. There would be no risks to children's health and safety from hazardous materials and wastes as these risks are primarily associated with train maintenance and repair, which are not part of any of the Central Valley Wye alternatives. The Authority's design criteria would minimize risks to children in schools and parks near the Central Valley Wye alternatives from train accidents and derailments.

Economic Impacts

The HSR project would improve state and regional connectivity while facilitating new access to employment and educational opportunities and creating job opportunities across many sectors of the regional economy. Overall, it is expected that employment growth would be a net benefit for the region as a whole, as it would create approximately 4,800 new jobs and result in growth of the regional economy. The benefit to the regional economy would be the same under all Central Valley Wye alternatives.

Operations of the Central Valley Wye alternatives have the potential to expose animals grazing within 100 feet of the trackway to elevated noise and vibration levels that could cause disturbance. The Authority has determined that noise and vibration impacts on dairy cattle may warrant mitigation at distances less than 100 feet from the path of the HSR. As part of the SO-IAMF#2, the Authority would assist property owners with the filing of appropriate claims to receive compensation for economic losses in farm productivity. With incorporation of this measure, the economic impact of operations noise impacts on confined animal agriculture would be reduced.

Operations of the Central Valley Wye alternatives also have the potential to result in permanent impacts on economic conditions of county and city governments. Operations of the Central Valley Wye alternatives has the potential to reduce property values immediately adjacent to new transportation rights-of-way; however, with implementation of mitigation to reduce noise and visual impacts of the HSR operation, this is unlikely to affect regional property tax revenues. Operations and maintenance of the Central Valley Wye alternatives would generate new sales tax revenue of from \$163,000 to \$189,000 annually related to local expenditures.

3.12.9 CEQA Significance Conclusions

Table 3.12-21 provides a summary of the CEQA determination of significance for all construction and operations impacts discussed in Section 3.12.6.3, Central Valley Wye Alternatives. If there are differences in impacts before or after mitigation between the four Central Valley Wye alternatives, it is noted in the table. Where there is no difference in the CEQA level of significance before and after mitigation for a particular impact, the level of significance for that impact is the same for all Central Valley Wye alternatives.

Table 3.12-21 CEQA Significance Conclusions for Socioeconomics and Communities for the Central Valley Wye Alternatives

Impact	CEQA Level of Significance before Mitigation	Mitigation Measures	CEQA Level of Significance after Mitigation
Construction			
Disruption or Severance of Community Interactions or Division of Established Communities			
Impact SO#1: Temporary Impacts on Communities—Community Cohesion	Less than significant for all Central Valley Wye alternatives.	No mitigation measures are required	Not applicable
Impact SO#2: Permanent Impacts on Communities—Community Cohesion	Significant impact on community cohesion of Fairmead for the following Central Valley Wye alternatives: SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye	SO-MM#1 SO-MM#2	Significant and unavoidable for the following Central Valley Wye alternatives: SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye
	Less than significant for the Avenue 21 to Road 13 Wye Alternative	No mitigation measures are required.	Not applicable

Impact	CEQA Level of Significance before Mitigation	Mitigation Measures	CEQA Level of Significance after Mitigation
Displacements and Relocations			
Impact SO#3: Displacements and Relocations of Residences	Less than significant for all Central Valley Wye alternatives	No mitigation measures are required.	Not applicable
Impact SO#4: Displacements and Relocations of Commercial and Industrial Businesses	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#5: Displacements and Relocations of Agricultural Operations	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#6: Displacements and Relocations of Community and Public Facilities	No impact for any of the Central Valley Wye alternatives.	No mitigation measures are required.	Not applicable
Children's Health and Safety Impacts			
Impact SO#7: Temporary Impacts on Children's Health and Safety	Less than significant temporary construction impacts on school bus routes and pedestrian and bicycle routes, temporary air quality impacts, and temporary EMF/EMI impacts for all Central Valley Wye alternatives	Not applicable	Not applicable
	Less than significant construction noise impacts for the following Central Valley Wye alternatives: SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye	Not applicable	Not applicable
	Significant construction noise impacts on the Chowchilla Seventh-day Adventist School for the Avenue 21 to Road 13 Wye Alternative	NV-MM#1	Less than significant under the Avenue 21 to Road 13 Wye Alternative
	Significant hazardous materials impacts for all Central Valley Wye alternatives	HMW-MM#1	Less than significant under all of the Central Valley Wye alternatives
Impact SO#8: Permanent Impacts on Children's Health and Safety	Less than significant traffic hazard impacts for all Central Valley Wye alternatives	Not applicable	Not applicable

Impact	CEQA Level of Significance before Mitigation	Mitigation Measures	CEQA Level of Significance after Mitigation
	Significant traffic noise impacts for the following Central Valley Wye alternatives: SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye	NV-MM#3	Significant and unavoidable for the following Central Valley Wye alternatives: SR 152 (North) to Road 13 Wye SR 152 (North) to Road 19 Wye SR 152 (North) to Road 11 Wye
Economic Impacts			
Impact SO#9: Temporary Impacts on Employment	Less than significant for all Central Valley Wye alternatives	No mitigation measures are required.	Not applicable
Impact SO#10: Permanent Impacts on School District Funding from Student Relocations	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#11: Permanent Impacts on School District Funding from Reduced Property Tax Revenues	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#12: Permanent Impacts on School Bus Transportation	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#13: Temporary Impacts on Agricultural Economy—Noise and Vibration	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#14: Permanent Impacts on Agricultural Economy	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#15: Permanent Impacts on County and City Property Tax Revenues from Property Acquisition	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#16: Impacts on Sales Tax Revenues	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Operations			
Disruption or Severance of Community Interactions or Division of Established Communities			
Impact SO#17: Permanent Impacts on Communities—Noise Impacts	Not applicable. Not evaluated under CEQA	No mitigation measures are required.	Not applicable

Impact	CEQA Level of Significance before Mitigation	Mitigation Measures	CEQA Level of Significance after Mitigation
Children's Health and Safety Impacts			
Impact SO#18: Permanent Impacts on Children's Health and Safety	Less than significant air quality, EMF/EMI, hazardous materials, and safety and security impacts for all Central Valley Wye alternatives	Not applicable	Not applicable
	Significant operations noise impacts for all Central Valley Wye alternatives	NV-MM#2, NV-MM#3	Significant and unavoidable for all Central Valley Wye alternatives
Economic Impacts			
Impact SO#19: Permanent Impacts on Regional Employment	No impact	Not applicable	Not applicable
Impact SO#20: Permanent Impacts on Agricultural Economy	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#21: Permanent Impacts on County and City Property Tax Revenues from Changes in Property Values	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable
Impact SO#22: Permanent Impacts on Sales Tax Revenues	Not applicable. Not evaluated under CEQA	Not applicable	Not applicable

Source: Authority and FRA, 2018

CEQA = California Environmental Quality Act

HSR = High-Speed Rail

EMF = electromagnetic fields

SR = State Route